The Builder.

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Memorials of Burne-Jones.

AT the time of Sir E. Burne-Jones's death we endeavoured to sum up briefly what appeared to us to be the essential qualities of his art, and the place it was likely to hold in the history of English painting.* Such a summary, though in that case it was the result of many years' observation and enjoyment (great, if not unmixed) of his pictures, could only be made in a tentative and suggestive manner. As Mr. Clausen truly said in the lecture reported on another page, it takes fifty years at least before the world can come to a settled judgment on works of art apart from the disturbing influences of contemporary taste or fashion, though those who are able to keep their thought out of the grooves in which art-criticism at present runs may have a right to think that they see a little more clearly on that account. Burne-Jones's artistic reputation was a peculiar one. He was idolised by a certain number of amateurs, but never understood or cared for much by the general public, to whose judgment he on his part was probably entirely indifferent. A late well-known nobleman, whose social extravaganzas were varied by fits of æstheticism, in a magazine article compared Burne-Jones with Wagner, intending the comparison as the greatest compliment he could pay the painter. The coupling of the names of the quiet, retiring English painter and the robustious, self-asserting German, blowing trumpets about his own art all his life, seems absurd at first sight; but there is something in it. Both drew their subjects from romance and neglected common human character; both were great in colour and weak in form, for Wagner's mastery in orchestral effect corresponds with colour in painting, and his weakness in construction and melodic invention corresponds with Burne-Jones's weakness in drawing; and both disliked the works of their contemporaries in art, with the difference that Wagner's was positive and noisy depreciation, Burne-Jones's was only a negative indifference, rather implied than expressed.

There was never anything of trumpet-blowing about Burne-Jones. He worked to satisfy his own ideals in art, and let the public take it or not as they pleased, and in this respect the biography* is quite in keeping with the character it commemorates. There is nothing of the exaggerated idolatry which is often the weak point of a biography of an eminent man written by his widow. The story of his life is quietly told, without any obtrusion of personal feeling; it is perhaps a little lengthy, though it cannot be said that any part of it is uninteresting. What disappoints us somewhat is that it does not throw much light on Burne-Jones's views about art, or the reasons which led him to develop the special character of subject and treatment which is associated with his name; we get a hint once or twice from an occasional remark, but not more than that. As to any analysis of his art and its objects, no doubt his biographer felt that she was not called on to attempt anything of the kind.

The history of the artist's childhood and youth is curious in respect to the utter contrast of his surroundings with the kind of work which he was destined to do in the world. Born in the house of a tradesman in Bennett's Hill, Birmingham (his father was a carver and gilder), and having lost his mother, who did not long survive her confinement, he became the special care of a certain Miss Sampson, who performed the part of mother to him, and who appears to have been a most kindly and motherly soul, and as complete a Philistine in regard to art or culture as motherly souls often are. The father, in his grief for the mother's death, could for a time hardly endure the presence of the child, and it was an old friend of the mother's who, in compassion, called Miss Sampson to the rescue. The house is described as it was when the narrator, then sixteen, first saw it :—

"I recollect how destitute the house was of any visible thing that could appeal to imagination; chairs, carpets, tables, and table furniture each duller and more commonplace than the other. The only objects I saw within those walls that had a touch of humanity in them were some framed pieces of needlework that looked like windows into another world, because it seemed as if someone had been interested and amused in their making. Amongst them were two animals—one a lion with a face like a man, with a handsome aquiline nose—the other, I believe, a tiger; also a smaller and finer piece, of a girl mourning at a tomb, with a pendant which I forget. Over the mantelpiece and

* See *Builder*, June 25, 1898.

* Memorials of Edward Burne-Jones. By G. B.-J. London: Macmillan & Co. 1904.

above a hard-featured square clock was a picture of the church and graveyard of Snaith in Yorkshire, which bristled with gravestones as if it had been a city cemetery. Miss Sampson told us that these were the tombs of her relatives, represented there as altogether in order that the drawing might be kept within reasonable dimensions. Some pieces of old blue china, and the remnants of a Worcester dinner service copied from an Oriental pattern, were the only articles of household use that I remember that were not actually ugly."

It seems an extraordinary cradle for an artist who was to be the most anti-Philistine of painters; but perhaps it was the reaction against this kind of thing that, without his knowing it, led him to be so ready, a few years later, to join his friend Morris in a campaign against things ugly. The only thing related that points to his future vocation is that his great solace, from childish years, was drawing. He mentioned in after life to a friend that he thought this was what had most kept him up in the sadness of a childhood with no mother and a father who took little notice of him. But there was not an idea in his mind at that time of becoming painter. There seems to have been no attempt at any study of the art; he drew things out of his head partly for the amusement of his schoolfellows, and the verdict of the drawing master was—"might do better if he exhibited more industry." His ideal at this time was to be a clergyman. He took a great interest in his boyhood in questions of religious doctrine. There are two long letters written at the age of sixteen to a girl cousin, on the subject of the tenets of Arminians and Calvinists, and the true distinction between them. Still more incongruous seems the fact that he had a passion for practical joking, which seems to have survived his schoolboy days (one of the practical jokes of a later period was for all the guests one day at Morris's to join in boycotting their host at his own table, refusing to speak to him or take any notice of him), and some that are recorded are not remarkable either for wit or good taste, and might as well have been forgotten. Stranger still are the facsimiles of humorous sketches of this period; one of them a most amusing rough sketch of a three-decker pulpit with the rector, curate, and clerk in their respective strata. Who that looked at the pictures of the mature Burne-Jones could have suspected the original "Ned Jones," as his friends then called him, of being guilty of humorous sketches?

It was not till he was twenty-three that he resolved on becoming a painter; and that he did so seems to have been mainly due to the influence of Morris and Rossetti, the latter more especially. He said later in life "I quite hated painting when I was little"; the National Gallery, to which he had been duly taken, did not make any difference in this respect; "until I saw Rossetti's work and Fra Angelico's I never supposed that I liked painting. I hated the kind of stuff that was going on then." This seems to imply that there was something innate in his love for mystical and idealised subjects in painting, which only waited for the occasion to be called into life. One of the most interesting things in the biography is the impression we get from it of the extraordinary power and influence which Rossetti exercised on those with whom he came in contact. It is recognised now by most people who look upon art with "considerate eyes" that the first enthusiasm about Rossetti's pictures was somewhat exaggerated; that they have defects both of technique and conception which his inspiration in colour could not atone for. But no one could read this part of the biography without coming to the conclusion that Rossetti himself was greater than his pictures; that he was a most extraordinary personality. To Burne-Jones, Morris, and others of his compeers, what Rossetti said was right, and was to be done, and there was no resisting or arguing against it. He was a nature on fire with zeal and enthusiasm. Very interesting and pleasing too are the glimpses we get of Morris in his young days. Later in life Morris became bigoted and one-sided in some ways and on some subjects; he mixed up politics with art in an unfortunate manner—*non hæc satis inter se conveniunt;* but there was nothing of this in the Morris of the Oxford days. All that we read of him here makes one love and admire him; and one can hardly imagine a more beautiful young man's countenance than that of Morris at the age of twenty-three, as given in the portrait here; a face that has all the vigour and life of youth, combined with an earnest and thoughtful expression, as of one with a serious purpose before him; such a countenance as gives presage of a noble life.

One cannot help feeling, however, that throughout the book we move within rather a limited circle; we only meet the ideas and the records of what might be called a clique (not in the disagreeable sense of the word) of artists who had a private ideal of their own, and to whom everything and everybody outside of that ideal were unworthy of consideration; almost indeed ignored. But one architect is worth mention, he who built Morris's house at Upton, which Rossetti described in his impassioned manner as "a most noble work in every way, and more a poem than a house." We have never seen the house, but the sketch of it given as one of the illustrations shows nothing to justify such raptures; it is a pleasing re-creation of the aspect of an old English farmhouse. With Morris, in later life, this detachment intensified into a pessimism in the light of which everybody and everything in the world was wrong except himself, Ruskin, and Burne-Jones. And in the attitude of the latter towards contemporary art and towards the Academy we see the same feeling, though less intensified and outspoken.

The two influences that mainly formed Burne-Jones as a painter, and gave him belief in himself and in following out his own independent line in art, were evidently Italy and Rossetti. His biographer says that during his first visit to Italy in 1859 "the cities that he saw and the pictures in them were such a fulfilment of his desire and such a revelation of what man could achieve that he ceased to be afraid of failure for himself. Many a time I have heard him say that nothing disheartened or took the life out of him so much as looking at bad work, but that the best was always inspiriting and life-giving." And at an earlier period, speaking of Rossetti's influence on him, he is quoted as saying:—

"He taught me to have no fear or shame of my own ideas, to design perpetually, to seek no popularity, to be altogether myself. . . So what I chiefly gained from him was not to be afraid of myself, but to do the thing I liked most; but in those first years I never wanted to think but as he thought, and all that he did and said fitted me through and through. He never harangued or persuaded, but had a gift of saying things authoritatively and not as the Scribes, such as I have never heard in any man."

And for one who wished to make painting a high calling and not a mere means of living or getting a reputation, there could have been, as far as it went, no better influence and advice; but did it not want tempering with something else, more prosaic certainly—advice as to the need of technical mastery of the figure? This would hardly have come from Rossetti, since he was practically indifferent to it himself. No painter ever worked harder at his art than Burne-Jones; the immense number of beautiful and highly-finished drawings and studies from his hand, independently of the pictures, is proof enough of that, as well as the chaffing testimony of Rossetti, that Jones was the most indolent man he knew—"when once you sit down to work you are too lazy even to get up again." When he gave evidence for Ruskin in the *cause celèbre* of "Whistler *v.* Ruskin," he said, "I think that nothing but perfect finish ought to be allowed by artists; that they should not be content with anything that falls short of what the age acknowledges as essential to perfect work"; and he characterised the "Nocturne in Blue and Silver" as "an admirable beginning," but which in no sense whatever showed the finish of a complete work of art.* As to the painstaking finish of his own work, his biographer remarks that the moment of pronouncing one of his pictures finished was only the moment when the van arrived which was to take it away. Yet with all this one cannot help being a little reminded of his school drawing-master's verdict quoted above—"Might do better if he exhibited more industry"—in a certain sense, that is. Taking to the art of painting at an age when most men who mean to be painters in earnest have already gone through a severe training in figure drawing and anatomy, there seems hardly any evidence that he appreciated, any more than Rossetti, the necessity of such training. There is a passing reference to attendance at some life classes, but it does not seem to have lasted very long, and it is an unquestionable fact that his early pictures showed sometimes very bad drawing indeed; in the later ones a life's practice had made a difference, and when he introduced figures ten heads high, one may assume that he was quite aware that they were unlike nature, and chose to have them so, just as he must have been aware that in "The Golden Stair" he contradicted all the facts of perspective in making the rear figures as tall as the foreground ones in order to get a better decorative effect. That of course is a convention in painting for which there are plenty of examples in the work of great artists. But as to the matter of drawing, is not correct and

* Considering Burne-Jones's attitude of antagonism to the Royal Academy, it is worth note that this is almost exactly the criticism which the present President of the Academy pronounced on Whistler, at a recent Royal Academy dinner, to the effect that the deceased artist had left as a legacy "the art of leaving off where the difficulties begin."

masterly figure-drawing one of the qualities which "the age acknowledges as essential to perfect work"?

The advice and influence of Rossetti, in fact, was inspiring but narrowing. Here was a painter who had never cared for painting till he saw the works of Fra Angelico and of Rossetti—odd names to mingle, but both marked by mystical beauty and significance accompanied by imperfect technique. There was nothing to counteract the influence, and the result on an ardent and imaginative mind was the earnest following out of a mystical school of art in which ideals counted for everything, and nature and the higher craftsmanship were altogether secondary. His art is a world in itself, a beautiful and suggestive world; but it is one in which we see nature as through a stained glass window. Probably he would have said that was just what he intended; his object was to make painting solely the expression of an ideal. The representation of real life in painting he seems to have shrunk from. In a letter of his that we have seen somewhere (it is not inserted in the biography), he satirically said to a friend that he thought of painting a picture of a stout city man reposing, with a newspaper in his hand, on a gilded sofa of early Victorian type; he supposed that was what the public would like. The public (of this country) are stupid enough about art, but to imply that there is no medium between allegorical figures and such a subject as that only shows a narrow judgment. It would be interesting to know what Burne-Jones thought of Velasquez; the name does not occur in the biography. In regard to the fact that all his faces seem to be alike, and though beautiful, to have one expression, or rather no expression, a light is thrown on this by the remark quoted in regard to his design for the three Queens mourning over Arthur—"They are queens of an undying mystery, their names are Lamentation and Mourning and Woe. A little more expression and they would be neither queens, nor mysteries, nor symbols, but just—not to mention baser names in their presence—Augusta, Esmeralda, and Dolores, considerably overcome by a recent domestic bereavement." That is an intelligible argument, and there is something in it, but we are rather convinced of the difficulty than of the impossibility of the task. One painter at all events has shown that it is possible, in an ideal composition, to give the most striking variety of character to different figures and yet keep them all on the plane of a great monumental style. But his name was Michelangelo.

The story of Burne-Jones's election to and withdrawal from the Royal Academy, which is told at some length, is, we think, more creditable to the Academy than to him. The invitation to him to become a member, if it were partly prompted by a desire to secure to the Academy a painter of fame, was at any rate made in a very complimentary manner. After making a favour of joining, he exhibited one picture only, "The Depths of the Sea," which, coupled with the verse attached to it, was pretty obviously a satire on the Academy, though we do not imagine that they realised this at the time; he ignored the Academy exhibitions altogether afterwards, and then withdrew in dudgeon because he had not been elected a full R.A. We cannot see that, under the circumstances, he had a right to expect it; and considering that the Academy at that time included in its ranks Millais, Watts, and Leighton, of whom the two first were certainly greater painters than himself, and the third at all events a much greater master of drawing and with a higher perception of style, his attitude seems to us quite unjustifiable.

We are not for a moment questioning that Burne-Jones was a great painter, one of the most remarkable that modern England (we might say modern Europe) has produced; but we think he had limitations which were not perceived either by himself or his friends. He has added much, however, to our store of suggestions of beauty, and he followed a high aim in all he did. As a piece of symbolical Christian art perhaps nothing more beautiful and pathetic has ever been done, even by the early Italians whose work he admired so much, than the design of the "Tree of Life" made for the American church at Rome—beautiful both in a moral and in a decorative sense.

We might say much about the personal traits recorded in the biography, but we are naturally concerned here mainly with the artistic side of it. Burne-Jones's politics seem to have been of a crude and rather violent and unpatriotic character, but we are interested to find that he had a juster appreciation of Napoléon than most Englishmen seem equal to. There are many opinions and sayings of himself and others on life and art and literature which are interesting and suggestive, but none more so than his comprehensive remark, *à propos* of the wanton slaughter of animals in "sport"—"Teach children to draw animals, and they won't wish to kill them."

Though unable to regard Burne-Jones's art as all that some take it to be, we have read this record of his life with much interest and sympathy. It has been written by the right person, for the reason indicated by the painter himself in a conversation on the subject with his wife—"For you *know*"; but there is no attempt to force upon the reader any special view of the artist or his art—it is simply a record; and the references to such serious circumstances as their engagement and his death, in their combination of reticence of language with indication of deep feeling, could be read (we hope) by no one without sympathy and emotion.

WAREHAM CHURCH, DORSET.—A four-light transome window has just been executed and placed in Wareham Church by Messrs. Percy Bacon & Brothers, of London. The subjects, which are of a pictorial nature, are the "Prodigal Son," "Good Samaritan," "Lost Sheep," and the "Lost Piece of Silver." This is the third window executed by Messrs. Bacon for this church.

PRIMITIVE METHODIST CHURCH AND SCHOOL, STAVELEY, DERBYSHIRE.—The Staveley Primitive Methodist church and school, which were burnt down at the beginning of last year, have been rebuilt, and were opened a short time ago. The new buildings have been erected at a total cost of about 2,000*l*. The architects were Messrs. W. J. Morley & Son, of Bradford and London, and Messrs. T. Lee & Son, of Staveley, were the builders, and Messrs. Lund & Swann, of Eckington, the joiners, etc. The heating apparatus was installed by Messrs. Wright Brothers, of Sheffield, and the leaded lights were put in by Mr. W. Blythe, of Bradford.

NOTES.

Architects and the Law. WE may draw the attention of the Council of the Institute of Architects to the report of the case of Tarring *v.* Aldridge, in our legal column, in the course of which there occurred the usual expressions of contempt and almost insult in regard to the representative body of the architectural profession, which have become customary in courts of law. The plaintiff said that his charges were in accordance with the scale of the Institute of Architects, on which the counsel on the other side "protested in the name of the public against a small body sitting in a room and making out a scale which they sought to impose on the public." Lawyers, we suppose, do not seek to impose any scale of charges. The judge of course supported this, and directed the jury that they were at liberty to disregard the Institute scale of charges. There is no other liberal profession in England which is exposed to this kind of habitual contemptuous treatment in courts of law. The Institute may have been mistaken in not seeking a legal recognition of their charges, but they at least have a right to be treated with respect.

The Late Mr. Blashill. WE have to record in our obituary column the death of Mr. Thomas Blashill, for many years architect first to the Metropolitan Board of Works and afterwards to the London County Council, an appointment for which he was selected out of a great number of candidates, and for which he had some peculiar qualifications, possessing exceptional practical knowledge of materials, and a great capacity for business administration; and there is no doubt that the building business, or the Building Act business, of the County Council, was conducted by him with great ability. If he was not an enthusiast in regard to the artistic side of architecture, it may be said that the County Council did not specially ask for such a quality in their architect, and would possibly have felt embarrassed by it rather than otherwise. Mr. Blashill was much interested in the planning of artisans' dwellings, on which he read an admirable paper, which was printed, with some illustrative plans, in our issue of February 17, 1900. He was also interested in archæological questions, on some of which he had a good deal of out-of-the-way information, and in some subjects connected with natural history. Mr. Blashill was a man of genial and sincere temperament and manners, and was liked by all who had to do with him, except perhaps those who tried to get some uncalled-for concession from the County Council in regard to a building line.

The Light and Air Question. THE judgment of Mr. Justice Bray in the case of Ambler *v.* Gordon, reported in our last and present issue, deserves to be carefully noted. It may be considered as a supplement to or gloss on the celebrated decision in the Colls' case, as it is now named. The question which the judge had to decide was whether, under the decision in Colls' case, the owner of the dominant tenement was entitled to an extraordinary amount of light for a

special purpose after such amount had been enjoyed for twenty years. This point Mr. Justice Bray decided in the negative, and having regard to the judgment of the House of Lords this legal result appears inevitable. The basis of that decision was that, in order to give ground for an action by the owner of the dominant tenement, he must show such an amount of deprivation of light as to amount to a legal nuisance. It is obvious, however, that if sufficient light is left for general and ordinary purposes, but not enough for extraordinary, a nuisance, in the legal sense, does not exist. Again, as Mr. Justice Bray acutely pointed out, the legal basis of the right to light has often been stated, especially in old decisions, to be based on the fiction of a lost grant. But how could there be a grant in bygone days to an extraordinary amount of light used in modern times for a modern business or trade? Thus this case exemplifies the remarkable simplification of this branch of English law which has been created by Colls' case, and how far-reaching and, indeed, increasingly important it is.

Our Neglected Waterways.

AN illustration of the manner in which navigable waterways are neglected in this country is afforded by the present plight of the River Ivel, which flows into the Ouse at Tempsford, in Bedfordshire. About a century ago this stream was canalised by the Ivel Navigation Company. Being in communication with the sea by means of the Ouse, the waterway was largely employed for the conveyance of coal and merchandise to and from the several towns, villages, and flour mills along its course, and until the advent of railways was the only means used for the transport of coal. Subsequently, the company was wound up by Act of Parliament, all rights of navigation and lands taken for towing-paths being surrendered. Since then the river has been neglected absolutely; its bed is gradually silting up, and weeds have grown in some reaches so that even a rowing boat cannot pass. Accumulations of silt have enabled property owners to enlarge their fields and narrow the channel by the reclamation of land, and one arch of Girford Bridge, near Sandy, is completely blocked, the inevitable result being the flooding of large areas during rainy weather. A curious point is that no one seems to be responsible for the control of the river. The Urban District Council have at last discovered the undesirable conditions which exist, but, believing they have no jurisdiction, are urging the County Council to take the measures necessary for flood prevention. We do not know what the County Council will say, but, judging from past experience of similar bodies, we imagine they also will disclaim responsibility.

Reinforced Concrete in Europe.

CONCRETE reinforced by iron was used in England and America long before the peculiar advantages of the combination were known, and quite fifty years before reinforced concrete was applied on the Continent. Nevertheless, it was left to a simple gardener, Monier, of Paris, to discover the valuable properties developed by the incorporation of wire netting with concrete. Thus, as Mr. Probst, of Vienna, points out in a paper read before the Western Society of Engineers (U.S.A.), "the fatherland of reinforced concrete is undoubtedly France." This paper traces the development of the material in Europe, a division of the world in which the author does not include the United Kingdom. One interesting circumstance mentioned is that the use of ferro-concrete in Belgium was introduced by an architect to meet the requirements of a "fireproof" residence. Another proof of the readiness exhibited by Continental architects to free themselves from the trammels of conventional methods is afforded by M. Visintini, who has made extensive use of lattice beams in reinforced concrete for floor and bridge construction in Switzerland, Austria, and Germany. Architects are not always behind the times as some people suggest.

The Weight of a Crowd.

CONTINUING the discussion of a paper on "The Structural Design of Buildings" before the American Society of Civil Engineers, Professor Johnson has pointed out by letter that the weight of a crowd of people is frequently under-estimated, and at the same time he sent a series of six photographs, which are reproduced in the Proceedings for December, 1904, showing crowds of different densities, varying in weight from 41·5 lb. to 154·2 lb. per sq. ft. The views were obtained by placing different numbers of the writer's students in a square box constructed for the purpose and standing upon a weighing machine. This chamber was 6 ft. square, inside measurement, with vertical walls 5 ft. 9 in. high and without a top. The camera was at a window about 20 ft. above the box, and the photographs were taken when certain weights were recorded by the machine. The maximum weight of 154·2 lb. per sq. ft. was attained without selection of the men or undue crowding, and as a matter of fact some of the students taking part in the experiment expressed their opinion that the congestion upon a bridge giving access to the university football field was sometimes considerably greater. As several short men are represented in the photographs, it is clear that 160 lb. per sq. ft. might easily be attained on occasion. Adding an equal amount for vibration due to movement of the crowd, we have 320 lb. per sq. ft. as a factor for calculating the strength of a floor. The results ascertained by Professor Johnson are not altogether new, but the collapses of floors and temporary structures which take place from time to time indicate that very inadequate allowance is often made for the exceptionally heavy live loads and vibratory stresses to which they may be subjected on special occasions.

American Power Station Engines.

THE author of a paper read at the Institution of Mechanical Engineers describes the engines at two of the large power stations in New York, namely, the Manhattan Power House and the Rapid Transit Power House. Apart from the magnitude of these stations, the most interesting feature is to be found in the new type of engine adopted, which is a compromise between the horizontal and vertical types, and has been termed the "Manhattan" engine because it was first introduced at the power house of that name. It is believed by American engineers that this type is unequalled for its special purpose, occupying little space, possessing evenness of turning effort, being accessible for repairs, and showing no undue or unequal wear in the cylinders owing to their vertical position. The engines inspected by the author at the St. Louis Exhibition were somewhat disappointing, and, judging from his paper, it seems that the engineering section of the exhibition fell far below that of the Paris Exhibition of 1900, where the machinery was a far better representation of the general engineering practice of the world.

The Late Mr. Boughton.

ONE must regret the more the sudden death of Mr. G. H. Boughton, who succumbed last week to a crisis of heart disease, since he had evidently during the last year or two been meditating a new departure in his art, which he has only had opportunity to show us the commencement of. For a good many years his work had been mainly confined to pictures of Puritans or Puritan maidens in the snow; the latter were always very pretty, and there was a completeness of style about these works which was satisfying, though a little tinctured with mannerism; still, one felt that the programme suffered from repetition. His picture, "By the dark waters of Forgetfulness," in the Academy two or three years ago, was an evident attempt to break new ground with a poetic and imaginative subject, and was a pathetic figure, though still characterised by that cold colouring of the flesh which gave always a somewhat artificial appearance to his figures. One or two other works painted since then seemed to show that the Puritan maiden vein, worked a little too long, had been definitely abandoned, and one looked with interest to see what further developments would follow. He was a painter whose works, if not powerful, were at any rate always pleasant to look at.

Mr. Newton Benett's Drawings.

MR. NEWTON BENETT'S second exhibition of water-colour drawings at the Society of Fine Arts is a great advance on his first one two or three years ago. That was an exhibition to be regarded with respect and recognition; the present exhibition is one to evoke enthusiasm. It is a collection of most beautiful and delicate landscapes, showing great truth to nature and most conscientious execution. The subjects are carefully chosen in regard to composition and pictorial interest; there is not one that does not make a picture; and there is no mannerism in the treatment of them. Mr. Benett sets an example to some water-colour painters in the careful way in which he treats his buildings; notice the drawing of the architectural features of the church in "Christchurch, Hants" (9); nothing is slurred over, as much of detail is shown as the eye could see in the actual building at that distance and in that light, but no more; it keeps its place in the picture. The old houses in

"Sandwich Haven" (25), the church of St. Cross (33), and the distant buildings seen in the charming drawing called "Under the Willows, Lechlade" (48), are all examples of this, which we point to because it is so common with many water-colour artists of the day to wash in buildings anyhow, as if their real appearance were of no consequence as long as they come into the scheme of composition. As a specially architectural subject we may mention the drawing of "King John's Bridge, Tewkesbury" (44), which in the treatment of brickwork and masonry texture is worthy of the late Mr. Boyce. Among the drawings which are especially admirable for general landscape effect we may specially mention "The Home Field" (7); "The Wareham Road. Corfe Castle" (10), a perfect bit of landscape composition; "A Haunt of Ancient Peace" (13), with a delightful old stone house rising above trees and water; "The Rainbow" (16), a noteworthy effort at the almost impossible achievement of representing a rainbow in pigment; "Corfe Castle" (32); "Buscot Lock" (49), a perfect bit of foreground; "Bridgnorth—a quiet afternoon" (53); and "Christchurch, Hants, —late afternoon" (36), which should be looked at from a little distance to realise the broad effect of afternoon sunlight in which it is steeped. There is no striving after effect and no neglect of detail in any of the drawings; they are careful and sympathetic studies of nature as she is.

Elections at the Royal Academy.

THE Royal Academy, at a general meeting this week, elected Mr. David Murray, A.R.A., to the full honours of the Academy as R.A., and elected as Associates Mr. David Farquharson and Mr. Reginald Blomfield. The election of Mr. Farquharson, after the remarkable landscapes which he has recently exhibited, was a foregone conclusion. All Mr. Blomfield's many friends will be glad to congratulate him, from personal motives, on his election, though we cannot sympathise with the view of the art of architecture which he represents, and which unfortunately appears to be the prevalent one at the Royal Academy.

STUDENTS' DRAWINGS AT THE INSTITUTE.

THE subject this year for the Soane Medallion is a Royal palace on an open site, having a central courtyard and terraced garden front. The subject is an inspiring one, unhampered as it is by restrictions of cost or site, and yet the result is disappointing. The subject perhaps is almost too large for the majority of students under the age limit imposed in the conditions of the competition; it would form a delightful yet difficult exercise for any practising architect of more years and greater experience. Such a subject requires a vein of genius to stamp it as "Royal" in contradistinction to enlarged commonplace. A Royal palace suggests an order of architecture severely classical; an open symmetrical plan in which dignity is not separated from mystery and the unexpected; and elevations showing interest in grouping and light and shade, and an architectural environment of courtyards, fountains, and vistas such as Inigo Jones and Vanbrugh loved. There is no doubt that the best design has been awarded the prize—that of Mr. S. Herbert Maw. The planning shows such a very thorough investigation of the possible requirements of a palace that its rather congested appearance may be forgiven. The only point that is overlooked seems to be that of a throne or reception room; neither the ballroom nor banqueting hall is suitable for this purpose, seeing that they would on an important occasion all be in use at the same time. The approach is from the central courtyard, reached on crossing an open loggia forming the fourth side of the courtyard. The plan on the axis line of the approach is fine—it is reminiscent of the Barberini Palace at Rome. The twin staircases on either side of the hall, similar to those at the Museum at Vienna, form the arms of a Greek cross, which is very apparent in the plan; there is, in fact, quite an ecclesiastical feeling of the Roman type about the plan throughout. The elevations are an attempt to express the great principles of the Renaissance, but are without distinction. They are, however, unobjectionable, and the sections and detail drawing show how thoroughly—and often how successfully—the difficulties of design have been grappled with; they indicate besides a fine constructive sense.

Mr. R. W. Pickering obtains honourable mention for his plan. It is one of great ability and shows largeness of conception; the arrangements are thorough and well thought out. The design suffers rather from not being very well shown. The drawings include a nice perspective drawing, and externally they show a treatment based on Hampton Court and the Louvre.

Honourable mention is also awarded Mr. W. S. A. Gordon. His plan is original, but it lacks in grip; the staircase arrangements are not satisfactory; the rooms are made too frequently to fit the elevations for the plan to be good. The drawings are interesting, and the elevations are perhaps the best of any shown, but no elevation will redeem a bad plan. If these elevations expressed the plan as they should do they would not be so attractive. The design by "Roy" shows interesting possibilities, but is not worked out—the only plan shown is one-half of the ground floor. The courtyard is interesting in plan and elevation. The elevations themselves show Spanish influence; they are too small in parts and too disconnected for impressive effect.

The designs of "Q. E. D." and "H. M." are commendable for dignity of plan and sober design. That under the motto "Concrete" is feeble in the extreme in plan; it shows, however, a suitable and not unpleasant treatment of the method of construction proposed, though we have not yet—we say it thankfully—arrived at the time when Royal palaces will, from choice, have walls of reinforced concrete.

There are, as usual, a large number of competitors for the Tite prize. The subject this year is a hotel lounge and staircase. The subject is an attractive one from the point of view of design, without involving so much work as is sometimes the case. The prize has been won by Mr. Robert Atkinson with an admirable design admirably drawn. The staircase, semi-circular in plan, opening out of the square hall, is very happily conceived, and beyond, the upper order of the design, which is in the nature of an open screen, gives a very pleasant effect of perspective, emphasised by the method of lighting. The roof is a single, deep, saucer-dome, supported by pendentives on semi-circular arches the full width of the sides of the hall. These arches look rather overpowering for the lower order carrying them; no doubt the piers are sufficient structurally, but they are not convincingly so to the eye. The figure sculpture is well drawn, and the materials —mostly marbles—are well expressed on the drawings. The perspective view in colour is rather crude and garish.

Mr. C. L. Wright gains honourable mention for a quiet and subdued design of the old school type—a type which is too little the fashion at the present day. The plan shows open loggias on two floors, with the grand staircase at one end of the hall leading to the upper one. The draughtsmanship, like the design, is unassuming and accurate. The best design shown, in our opinion, is that of Mr. Alick G. Horsnell, which receives a certificate of honourable mention and five guineas. If it has a defect it is that it is too like a Roman basilica; this effect would have been minimised had the section suggested another floor over the hall. The sections suggest the sturdy grasp and reasonableness of the late Mr. Brydon's work. We think this design might have pleased the judges better still had it been more finished; the drawings would have been much more readable with washes of colour over the sectional parts of plans and sections.

A plan which is difficult to read by reason of the masses of detailed ornament on floor and ceiling is that by "Bathon"; but for this defect it looks as though it might be good. "Martlett" shows a good design in pencil drawings, and "Anchor" a nicely-coloured set, the design based on wooden construction. A praiseworthy study in continuous vaulting supporting a central dome is that by "Scala"; the sectional drawings are better than the main design shown in the perspective view.

The Grissell this year produces nothing very interesting from the architect's point of view. The subject is a design for a winter garden in iron and glass. Mr. J. A. M. Hunter has won the prize. Mr. Hunter has designed a square building, having square corner towers at the angles, steel-plated, and lit with small casement windows. The central area between the towers is domed with an octagonal dome of iron and glass. The quarter full-size details are model constructive diagrams, and interesting in their design. "Irony of Fate" sends an original design, which would have been of some value had it not been so theatrically treated. The lines of the design are good, but the large glazed dome of rosy-pink glass would be worse in reality than it is in the drawing. The three other designs submitted in this competition are honest efforts to solve the difficulties of construction, but as designs they do not call for special notice.

The drawings for the Pugin Studentship represent seven sets. None of them show real distinction in draughtsmanship. Mr. E. Garratt has, without doubt, fairly won the Studentship by a set of careful measured drawings, in a uniform grey pencil line. His subjects are chiefly from Tewkesbury Abbey, and the drawing of the Beauchamp Chantry there is a fair specimen of his style of work. His line lacks crispness and life, while one cannot fail to compare his presentment of the pulpit at St. Chad's, Birmingham, with the finer drawing of the same by Mr. Haywood, in a former Pugin competition. But this style of drawing Gothic work, in fact, leaves much to be desired. Gothic, of all styles, with its delicate grace and freedom, wants more than a hard and fast line to adequately show it up. The very few freehand sketches in this set are quite ordinary.

An Hon. Mention and 10*l.* 10s. have been given to Mr. H. A. Dalrymple, who sends four strainers. The full-size details in pencil and wash are his best work, but they are somewhat unattached. We have, for instance, a half F. S. detail (how long will such extraordinary S.'s. be printed) of the plan of a jamb at Ely with no scale drawing to explain it.

Mr. Anthony R. Barker shows what is, in many respects, the best set sent in. Here we have a return to the ideal of little snippets and colour notes, popular in some quarters, both for the Pugin and Owen Jones Studentships. But there is real delicacy as well as sense of mass in the colour sketch of Salisbury Cathedral. It is hung so low down that it can hardly be seen, and students may well be warned against putting good sketches at the bottom of a strainer. The inked measured drawing of the North Porch at Wells is also a little refreshing beside the timidity of line seen in some other sets.

Mr. Walter Godfrey shows some quite unremarkable pencil sketches, which suggest that he is, as yet, in too experimental a stage with his material. He can be recommended to stick to the style of the sketch of St. Ouen, on his first strainer, which has qualities. His measured drawings are thin and lifeless. W. L. shows pencil sketches in a stronger style, but quite lacking in constructive grip. The sketch showing the spire of St. Mary, Stamford, etc., is perhaps his best, and the colour drawing of the west door at Paignton, Devon, is effective enough in its way. Mr. Frank Dyer's principal achievement is a measured drawing of arcading in Ely Cathedral, a sheet which is rather spoiled by the scattered and insignificant printing, and a certain tortuousness in the drawing of the moulded work. Some of his work (notably the measured drawing in shaded pencil of St. Mary, Beverley) recalls the style of illustration in the early days of the Gothic revival. Mr. Norman Culley goes in for a rather "woolly" style of pencil sketching, the result of smearing or rubbing. Some of his work is also obviously laboured and out of drawing. His best line of work is in the free pencil measurement, with wash, of the Priory Church details on his second strainer.

It is with greater satisfaction that we turn to the Owen Jones Competition, although it has

unfortunate features in the fact that only three sets have been sent in for it, and in the sight of Mr. Maclachlan's now too familiar strainers, one can but wish that the Institute had rewarded his patience, but the opportunity was more obvious last year. Without doubt, also, Mr. Maclachlan is to blame for not adding to the interest of his set year by year (this time, as far as we remember, it is thinner than usual), and it must also be said that his colour, though pleasing enough, and very well put on, would not always be convincing beside the originals of his subjects. His colour schemes, in fact, are conventions which lack the sobriety of true compromise as opposed to false. For all that, Mr. Maclachlan always makes a very effective drawing, and, without doubt, he has had hard luck.

It is gratifying in more ways than one to see the Studentship going to Mr. Harry Morley. The kind of Italian decoration which he shows in his principal exhibit is the very best kind, and has had but scant treatment within recent years in this competition. The Renaissance decoration of the Genoese Palaces has that balanced and (to modern architects) useful quality which is so often lacking in the subjects chosen by students. We fancy we have seen the coloured design of the ceiling of the Palazzo Imperiale at Genoa in some book, but, at any rate, Mr. Morley has gone to the proper sources for good Italian decoration. In his drawings, also, he has just hit the right colour tones, and displays all round as satisfactory a sense of colour as has been seen in this competition for some time. He gives us some renderings of the ever-popular Della Robbia ware, and more notable even than the drawing of the fine altar-piece in South Kensington is the blue tone in the copies of the circular plaques by Luca della Robbia, which is as right as it could be. One might only say, by way of adverse criticism, that two of the strainers are largely occupied by unnecessary matter for a colour competition, and that the red tone of the robe in the figure, by Fra Angelico, is not quite faultless.

Mr. Beattie Brown, who shows the third set, can evidently turn out very good drawings, but he is wildly at sea in some of his colour renderings. What ought to have been his finest work, the magnificent Della Robbia frieze of the Ospedale dell' Ceppo at Pistoia, is spoiled by its too ambitious and entirely wrong rendering of the colour scheme. More glaringly bad are the drawings of the Mausoleum of Galla Placidia at Ravenna. Even when brand new, and if dragged into the light of day, this gem of subdued Byzantine decoration could never have displayed such a staring French (or worse) blue as is here shown. In the large coloured measured drawing also the front of S. Maria Novella, at Florence, becomes almost unrecognisable. The best rendering in this set is perhaps that of the lavatory in the same church, but even this rather inclines to the worst side of what we might call the "emerald-green" school.

The Measured Drawings Medal Competition has been very well patronised. It is a little hard to understand why the Committee gave the first place to the Haddon Hall drawings of Mr. Edward G. Wylie. It is a very good set, but there are such obviously better ones in the room. We should have thought that the prize would undoubtedly have gone to Mr. Arthur R. H. Jackson's fine drawings in brown ink of the Pazzi Chapel at Santa Croce, Florence, but for the fact that they have no dimensions; for, in a competition of this kind, it is advisable, if not essential, to thus guarantee the accuracy of the work. The Pazzi Chapel drawings in this case, however, are of such a character that the elevations and sections, at least, would have been spoiled by figured dimensions. Their full size work is especially noticeable, the various details being finely rendered in an outline with the brush. The set gets an hon. mention.

We should be inclined to place second the drawings of Somerset House, by Mr. W. Harold Hillyer, which gain an hon. mention also. They represent not only an intrinsically finer subject than those of Haddon Hall, but seem also to show greater care and just as much force.

"Culdee" is to be congratulated on having produced a workmanlike set of Dunblane Cathedral; the more so as it has gained no mention, and as one can easily recognise the amount of labour bestowed on such a pronounced Gothic subject. "Erin II." has also produced a good, though somewhat unequal, set. His sections of the Church of Saint Benet, Paul's Wharf, are particularly good. "Auld Reekie" shows a good average set of the Banqueting House in Kensington-gardens; and "Porton Craig" shows the quaint little church of St. Monance, Fifeshire, in five very fair strainers. The other sets of the fourteen sent in are not at all remarkable. "Lux" shows St. James's Church, Piccadilly; "1903," Greenwich Hospital (or part of it); "Duomo," the peristylium of the dome of St. Paul's (an interesting subject); "Ell," Morden College, Blackheath; "Sundial," St. Peter's, North Hants; and "Wharfedale," Bolton Percy Church.

Mr. F. Winton Newman wins the "Arthur Cates" prize with an interesting set, comprising measured drawings, sketches, and design. The measured work shows vaulting from Westminster Abbey, and also the York Gate, a sketch of a wall or arch at Winchester, another of St. John's College Gateway, Oxford (reminiscent in style of Mr. Fulton's drawing of the same). His design for a picture gallery for a country town is monumental and original, though perhaps hardly sufficiently restrained in its proportions and detail. Mr. Vincent Hooper receives hon. mention. He exhibits measured drawings of the cloister vaulting and the north porch of Wells. The perspective view of the latter is a really fine drawing, showing a knowledge of sciography usually lacking in architectural drawings. His other drawings are also well and carefully done.

UNIVERSITY COLLEGE SCHOOL COMPETITION.

THE proposal to remove the University College School from the classic buildings in Gower-street to a more convenient site in Hampstead is an important step about to be undertaken by the governors of this leading London educational establishment. Competitive designs for the new buildings by five well-known architects have been on exhibition during the last few days, and we were invited to view the various plans, of which the following remarks may convey general impressions.

The assessor's task was not difficult; in selecting the design of Mr. Arnold Mitchell, Sir Aston Webb has selected the most practical and the simplest of the competitive schemes. The author's idea has been to provide an institution upon the lines of an orthodox secondary school, and in reconciling the accommodation of a large public school with departmental principles, he has arrived at a clever solution of the problem.

The plan, which is illustrated in this issue, shows a symmetrical arrangement of three buildings connected by two short corridors. The middle block is given up to central hall, with surrounding class-rooms on all four sides—which will be found to be a noisy arrangement—and the headmaster's and board-rooms are placed on either hand of the main entrance at the ground level. The bottom story of the wings contains juniors' and seniors' cloak-rooms and lavatories, and here the gymnasium and covered playground are also situated. The upper story of the north block is arranged as dining-hall with necessary service, while the south wing, which, owing to the fall in the site, has three floors, thereby securing symmetry to the main front, contains physical and chemical laboratories, library, and art school. A central corridor runs throughout the entire length of the three buildings. This is all very compact and straightforward, but certain parts are cramped in order to maintain this balance of parts. The gymnasium and covered play-ground, for instance, are too small. The staircases leading from the many first-floor class-rooms are much too narrow, and are forced into very limited positions; they discharge on to blank walls instead of delivering into wide free spaces. The gymnasium floor is lowered to obtain its necessary head room, but the design of the fronts produces a height of barely 13 ft. 6 in. in the dining-room, which is 60 ft. wide and accommodates 300 youthful diners. Moreover, the circular windows (there is also top light) are placed at such a height from the floor as to prohibit all outlook. No doubt some of these, as well as other matters, will disappear from the working drawings.

Turning to the elevations it is satisfactory to find a broad treatment of the brick and stone materials. A high-pitched green slate roof, spanning the central hall, rises, with a ventilating turret, in the middle of the composition. Two turrets similar in detail and size also appear above the main staircases, but we could not see that they possessed any purpose either of use or effect. The stone colonnaded entrance feature is in excellent taste, as is the severity of the simple parapet which finishes the outer walls of this middle block. The grouping of the three windows of each class-room is happy, and the attempt to make the ground-floor sanitary conveniences perform mighty acts of support to the angle piers and chimneys deserves a successful issue. The same breadth of treatment characterises the design of the detached blocks, although the lighting of the respective parts is subordinated to external effect. There is a refreshing absence of columns, pilasters and regulation competition features from what is undoubtedly a very successful scheme.

In the design submitted by Mr. H. T. Hare the subject is treated from a different aspect. Although following the distribution of parts given by the previous author, the problem is solved on the lines of a large college more than of an elementary school, and we find a greater expanse and wider distribution of buildings occupying practically the whole length of the site. The plan consists of a central block and two wings at right angles to the front, the three buildings being connected by long arms containing cloak-rooms and lavatories, in front of which are paved courts and cloisters. Corridors are necessarily extensive, and do not facilitate the working of the school, although they simplify the arrangement of mechanical heating and ventilation which is provided. The entrances, and indeed all details, are thoroughly sound in what is a fine architectural plan, and which is graced by a quiet and tasteful external expression; but the conception is too generous both in its interpretation of the authorities' demands and in its relation to the actual site.

Mr. Paul Waterhouse submits a design which appears to arise from an idea of providing two important fronts—one towards the playground and the other facing the road—and, although the general view suggests a struggle for supremacy by the two façades, the plans show a very adroit solution of what is thus made a complex problem. The buildings are grouped at the north or top end of the site into administrative block, central block, and science wing. The school proper is in the middle position facing due south, and has a long concave frontage line; cloakrooms are in the basement, class-rooms in two floors above, and assembly-hall, gymnasium, etc., to the rear.

Both the main buildings have three stories, but the arrangement of entrances, corridors, and staircases is very workable. The design, however, is wasteful in many particulars, especially in the basement, where the space below the great hall is entirely given up to bicycles, and the provision for coats and lavatories considerably overdone. Elaborate intentions are to be seen in the two entrance drives; the innumerable short flights of steps both in and out of the buildings are bad; but the design is full of new ideas, which, however, are more allied to public institutions of a healing or entertaining order.

Professor F. M. Simpson also places his buildings at the upper end of the site with the main front facing south. The principal entrance is from a forecourt on the west or road side, which is formed by the breaking forward of the science block. Here is another three-storied scheme which involves a large basement and much stair traffic. The general planning of the schoolrooms is good, but in minor points this design leaves much to be desired. For instance, the dining-room in the basement—which is 38 ft. 6 in. wide—is figured 12 ft. 1 in. high, and is badly lighted and ventilated. The south light of the boardroom is shut out to allow the exterior to imitate the artroom at the other end of the front, and the isolation-room, which is close at hand, is in no sense of the term isolated. The main staircases discharge inconveniently on the ground floor. The exterior shows a stone rusticated ground story with a projecting semi-circular open playshed, upon which rests a brick and stone superstructure cut up into regular masses in which four pediments are prominent. Although the roof and stone turret of the central hall are seen, the design of the fronts lacks interest.

The south end of the ground is selected by Mr. Chatfeild Clarke for his school buildings, which have an excellent plan shown by good drawings. The central hall, with class-rooms

on three sides, stands in advance of wings containing, on the north, laboratories and art school, and on the south, dining-room and service. A corridor on the east side joins up the three blocks, and beyond this are lavatories, etc., and space for extension of class-rooms. We should say that this would be a very convenient plan, but the grouping of the parts is unsatisfactory in that there is no symmetry in the fronts. The north wing has three floors, and the south one story, whilst the two-storied class-room block in the centre does not lend itself to a dignified or interesting front. Revision is needed in certain parts of the plan, particularly in the cloak-rooms, where confusion would arise from the absence of simple means of ingress and egress.

We were pleased to find that the conditions of the competition, drawn up by Sir Aston Webb, were very simple, and required $\frac{1}{16}$-in. scale drawings (in place of the $\frac{1}{8}$-in. scale usually demanded) which is quite sufficient for competition purposes.

It is to be hoped that when these new schools are built, and some of the work thus removed from Gower-street, the University College authorities will see their way to pull down the ugly one-story building erected some years ago, which defaces the street view of the quadrangle and destroys Wilkins's intention in the design.

MR. CLAUSEN'S LECTURES ON PAINTING.

MR. CLAUSEN'S fourth and concluding lecture to the Royal Academy students, on Thursday the 19th, was on the subject of "Taste." A painter, he said, finished and sent out into the world a picture, the expression of his standard of taste; something which might live or die, might give pleasure or not, or might come back to him and be turned with its face to the wall. But no judgment on a picture was worth much till the work had been some time before the world. The judgment of the moment might be warped by passing prejudices. We must therefore go back to the older painters, to those whose works had stood the test of, say, fifty years, for a standard of taste. Bad taste might be shown either in the choice of a disagreeable or revolting subject, or in the bad treatment of what was in itself a good subject. Taste in painting was something like natural good manners in life. A man's picture showed his outlook on the world. A picture that was in good taste might be compared to our ideal friend, the person who was in harmony with the best that we knew. There was no fixed standard of taste. Each quality in a great picture had its own standard; all artists did not strive after the same ideal. We might take it that Pheidias, Michelangelo, Raphael, Velasquez, Titian, Rembrandt, Claude, and Constable, were all artists who represented a high standard of taste in one way or another. Pheidias and Michelangelo indeed stood apart; they were so supreme that they represented a standard quite beyond criticism. In general, one requirement of taste was that form should be well expressed and should be natural. In this respect Raphael stood highest. Our difficulties apparently did not exist for him; and his works were true to human nature, though (as in Greek art) it was a form of human nature that was removed from modern life, that belonged to the past, and his works should be studied in the same spirit as we studied the works of Greek art. Watts had evidently closely studied ancient art in this spirit, and his works were an example of the value of such study. Velasquez furnished a standard of taste in the painting of natural things as we saw them. Owing to his realism of imitation he was in a sense nearer to us than Raphael, he was so like nature. We did not feel quite the same before the works of Titian and Rembrandt. They did not draw so direct from nature; we had to get their point of view. Titian was the highest standard as to what could be done with colour; Rembrandt as to what could be done with light.

Now, what was "Taste"? Reynolds said it was the act of the mind by which we liked or disliked anything. The natural appetite of taste was for truth; but it did not follow that all representation of truth was in good taste. Horrible subjects, for instance, were not in good taste. Such things no doubt existed, and French artists painted them—sometimes exceedingly well. Nor did it follow that one should always paint only pleasing subjects. But a subject should be in accordance with the general instinct of human nature. Cruel subjects were not so. Rembrandt was sometimes repellant, in spite of his power, from his choice of subject; witness his picture of the butcher's shop, and the carcase hanging up in the foreground. Was that in good taste? Other Dutch painters repelled us at times from the coarseness of their tavern scenes, but not so much as Rembrandt, because they were not so much in earnest. They might fancy a Dutch artist of this class taking one into a tavern, and saying "Never mind those people; they are rather drunk, but they are not bad fellows in their way; but look at this effect of light, look at the colour here," and so on. We might contrast the Dutch painters with Watteau, who in his pictures brought together everything that was charming in scene and in his figures; there was no jarring note. Yet his effect did not depend so much on the artistic management of light, or illustrate it so well, as the works of the Dutch artists. But he understood harmony of colour and truth of lighting, and his followers, who used the same properties as he did, were weak in comparison from their want of perception on these points.

If it were objected, do we see in nature the strong contrasts of light and shadow used by painters to bring the effect of a group or of an incident in a picture? He would reply, no; but it was perfectly legitimate for a painter to darken one portion of a scene in order to emphasise another. A spectator with his attention directed to one figure out of a crowd would see that figure prominently, and his eye would pass over the rest with little notice. A photograph of the scene, however, would have no such effect; the prominence of the figure of special interest would disappear. It was for the painter so to treat the scene as to recover that prominence of the most important figure in it. The painter suppressed things which were of minor importance in order to direct the attention to the most important point.

Taste was not, like fashion, a mere unreasoning preference. Taste depended on things being in their right relation to nature. We had each our own ideals, but in cultivating them we could get help from criticism, our own as well as that of others. We might put up another work along with one of our own, and see which we liked best, and why. If the result were unfavourable to our own work, we should generally find that it came to a question either of selection or of suppression. Or take up an old work of our own that we had forgotten, and see how it looked to us now. Things seen at a later date may be recognised as affectations, though not seen so at the time. On the other hand, work which was really of good and lasting quality might fail to get acceptance from being outside the general taste of its own time. Millet and Corot were instances of this; the former was almost neglected in his lifetime, and Corot never sold a picture till after he was fifty. [Fifty-six, we believe was the age; and if we remember right, Corot owed the commencement of his success to the late Emperor of the French, who bought his picture at the Salon and consequently brought him into vogue.] The opposition of public opinion to an artist with a new point of view did not arise so much from a dislike of novelty, as from a resentment of anything which implied that the current ideas in art were wrong. Public taste really rested on the standard formed by painters. There were a few of the public, perhaps, who understood them; a few who wished to do so; the remainder, the majority, were indifferent. The conditions under which painters worked in these days of exhibitions were very different from those of former days. There was a time when a painter was regarded as a necessary person, as we now regarded a carpenter; he received an order, did his work and was paid for it. The Dutch painters were in this position; they kept their own standard among themselves, but their purchasers knew nothing of it. When Velasquez was at Rome and waiting for a commission, he painted a portrait of his own servant to get his hand in. That painting was shown along with others in what was a kind of exhibition, when it was remarked that this figure alone seemed to be real and all the rest pictures; but it was not painted for exhibition; it was painted only for practice. In modern times, when pictures competed for public favour in large exhibitions, there was a temptation to paint something sensational in order to compel attention; the worst form of this was seen in the Paris Salon, where some artists painted pictures of cruel or revolting subjects in order to be looked at. We did not see this in England; but we might hear a picture approved as being "a good exhibition picture," but not one to live with. What were pictures for but to live with? Another result of the multiplicity of exhibitions was the attempt to attract attention by forcing contrasts of colour, even going to the extremes of pure white and pure black. They would find an immense range of colour in Watts's pictures, but neither black nor white. Harmony of colour was the true strength of a picture, not the opposition of exaggerated blacks and whites.

Painting was so subtle an art that it was only when well on in life that one arrived at the full understanding of the greatest work. Painters knew the difficulty of what might be called getting a picture together. The way the background was used was most important; but it did not occur to those who had given no thought to the subject that background was so important an element, nor that foreground figures were relieved against it. It was not so difficult to give the facts in a scene as to give them a fine artistic quality.

It was complained sometimes that painters had not the same chances now that they had in former days; that modern civilisation and modern dress were ugly and uninteresting. It would be found, however, that this had been a constant complaint in other periods. Reynolds said that the familiarity of modern dress destroyed the dignity of a picture; hence he frequently draped his portraits of ladies in a flowing semi-Greek costume; yet we now thought the dresses of that day very picturesque, and we no longer cared for portraits in Greek and Roman dresses. It was better to accept the life of the day as it was and make the best of it in painting; though it must be admitted that our present complex civilisation did not make for beauty. Painters liked simple and broad aspects of life, simple actions. A city man going to his business in the twopenny tube might be just as worthy a man as a ploughman doing his work in the open field, but the painter preferred the ploughman because he was seen in connexion with great elements of nature, while the city man was in the midst of depressing and commonplace surroundings. Light was the governing thing in painting; many things were beautiful if you only got the right light on them. A masterpiece in painting was as possible now as ever, if we had it in us to produce one.

THE ROYAL INSTITUTE OF BRITISH ARCHITECTS.

THE usual fortnightly meeting of the Royal Institute of British Architects was held on Monday at No. 9, Conduit-street, W., Mr. T. E. Collcutt, vice-president, in the chair.

The Chairman moved that the minutes be confirmed.

Mr. H. Hardwicke Langston said he would like something added to the minutes referring to the question he asked at the previous meeting. It was a question with regard to the case of Robins *v.* Goddard, and the President on that occasion said the matter was receiving the attention of the Professional Defence Committee. There was no reference to the matter in the minutes, and he considered it was of sufficient importance to find a place there.

The Chairman said he must confess he did not know what the case happened to refer to.

Mr. Langston said it was a question affecting the conditions of contract.* The decision in the case challenged the whole document, and rendered it of practically no affect at all. He considered it was certainly a matter which ought to be of interest to them, and if it was allowed to remain where it was they would feel the inconvenience of the decision. He wished to see a reference made to the question in the minutes, so that he might be assured that it was receiving the attention of the Committee.

Mr. Locke (Secretary) pointed out that no reference was made to the question in the minutes because it was an informal matter, and the Chairman simply said it was receiving the attention of the Committee.

Mr. Langston said that was why he wanted it noted in the minutes. He moved that a reference to the matter be added to the minutes.

Mr. Middleton said he was present at the

* See our issue for Dec. 17, 1904, p. 644.

last meeting, and heard the question, and feeling that anything which took place at a meeting ought to be recorded on the minutes, he seconded the resolution of Mr. Langston.

Mr. W. Woodward said, although it was true the question was raised by Mr. Langston, still it was entirely outside the subject of the evening. It was only by the courtesy of the Chairman that the question was allowed, and he did not feel it ought to be recorded.

Mr. Langston said it was quite true that he was answered courteously by the Chairman, but he felt a reference in the minutes was needed.

The Chairman said that as he understood it the Chairman of the evening took it as simply an informal matter. It was out of order in the first place, and was taken in a purely informal manner, and personally he did not feel there was any reason why it should be pressed upon the meeting.

Mr. Langston: It has been proposed and seconded.

The Chairman put the motion to the meeting, and declared it lost, and the minutes were confirmed.

The Late Mr. T. Blashill.

Mr. Graham (Hon. Sec.) said it was his melancholy duty to announce the decease of their esteemed colleague, Thos. Blashill. He was elected an Associate in 1866 and a Fellow in 1877, and for three years did practical and good work on the Council of the Institute. He was certain there was not a member of the Institute who had not a pleasant word to say of Thos. Blashill. During the many years he so honourably fulfilled the responsible duties of superintending architect to the London County Council, he rendered to many of them very great assistance in setting them right on the many vexed points in the Building Act, and he was sure they would never forget his good services, not only there, but also in that room, where he was a regular attendant, and took an active part in their discussions. Whether in Spring-gardens in his official capacity, or in that room, he always had with him an air of good fellowship, which never left him, and he felt sure that amongst the pleasant memories they would have of Thomas Blashill was that he was such a good fellow. It was their intention to send a letter to Mrs. Blashill sympathising with her in the great loss she has sustained, and expressing on the part of every member of the Institute their high appreciation of his merits and worth, and regretting that he had passed away from them so soon and so unexpectedly. He put the formal resolution that the letter be sent.

The motion was carried in silence.

Mr. W. Woodward said he would like to add one word. He remembered spending a pleasant evening with Mr. Blashill, and was delighted at the careful notes and sketches he always made on his Continental journeys. Mr. Blashill devoted many hours to the practical part of his visits, and if some of the younger members of the Institute could go through some of the note-books which Mr. Blashill filled on his many holidays on the Continent it would do them much good. He thoroughly endorsed what had been said as to the assistance rendered to them at Spring-gardens by the deceased. Although Mr. Blashill was controlled to a large extent by the Building Act Committee, he did extend to his fellow architects every possible assistance in the carrying out of their work in London. Mr. Blashill was a very busy man, and, as was always the case with busy men, he gave them the benefit of his experience, and read papers both before the Institute and the kindred institution in Great George-street. It was a lesson to all of them that the deceased, in the midst of his multifarious duties, was able to do so much for the benefit of the profession to which they belonged.

Mr. Hudson said that having met Mr. Blashill as a citizen in the Borough of St. Pancras, with which he (the speaker) was associated, he would like to refer to the great assistance the deceased gave to the charities of the district. Mr. Blashill acted as churchwarden on more than one occasion, and the work he did in connexion with the charities would not be forgotten for many years to come.

Prizes and Studentships.

Mr. Locke then read the Council's Deed of Award in connexion with the prizes and studentships for 1905. The Deed of Award stated that the Council have examined the works submitted for the Institute Silver Medals, the Soane Medallion, the Owen Jones and Pugin Studentships, the Godwin Bursary, the Tite Prize, the Arthur Cates Prize, and the Grissell Gold Medal, and gives particulars of the competitions and the results thereof as follows:—

The Royal Institute Silver Medals.

(i.) *The Essay Medal and Twenty-five Guineas.*—Fourteen essays on "The Development of Architectural Art from Structural Requirements and Nature of Materials" were received for the Silver Medal. The Council have awarded the Medal and twenty-five guineas to the author of the essay submitted under motto "Dil Aram" [Miss Ethel Charles, Flushing, near Falmouth]; a prize of ten guineas and a Certificate of Hon. Mention to the author of the essay bearing the motto "Beauty is Truth, Truth Beauty" [A. Romney Green, Haslemere]; and Certificates of Hon. Mention to the authors of the essays submitted under the mottoes respectively of "Brunelleschi" [J. J. Waddell, Drumoyne, Uddington, N.B.]; "Hawk" [J. Murray Kendall, S. Hampstead, N.W.]; "I bide my time" [L. P. Abercrombie, Wavertree]; " " [W. H. Godfrey, Chelsea, S.W.]; "S. Edmund, King and Martyr" [Cyril E. Power, Putney, S.W.]; and "Ubique" [H. P. G. Maule, London].

(ii.) *The Measured Drawings Medal and* 10*l.* 10*s.*—Seventeen sets of drawings were sent in of the various buildings indicated, and under mottoes as follows:—

1. "Auld Reekie":—5 strainers (Banqueting Hall, Kensington).
2. "Clyde": —6 strainers (St. Michael's Parish Church, Linlithgow).
3. "Culdee":—6 strainers (Dunblane Cathedral).
4. Device of Circles:—5 strainers (Church of St. Mary, Cartmel, Lancs.).
5. Device of a Red Disk:—6 strainers (The Pazzi Chapel, Santa Croce, Florence).
6. "Duomo":—4 strainers (Peristyle to Dome, St. Paul's Cathedral).
7. "Ell":—6 strainers (Morden College, Blackheath).
8. "Erin II.":—6 strainers (Saint Benet's, Paul's Wharf, E.C.)
9. "Lux":—4 strainers (St. James's Church, Piccadilly).
10. "1903":—5 strainers (Greenwich Hospital).
11. "Porton-Craig":—5 strainers (Church of St. Monance, Fifeshire).
12. "Sundial":—6 strainers (Church of St. Peter, Lowick, Northants).
13. "The Nilghai":—4 strainers (Church of St. Swithin, Worcester).
14. "Thames":—5 strainers (Somerset House).
15. "Unicus":—6 strainers (Haddon Hall, Derbyshire).
16. "Wharfedale":—4 strainers (Bolton Percy Church).
17. "Y":—4 strainers (Church of St. Alphege, Greenwich).

The Council award the Silver Medal and 10*l.* 10*s.* to the delineator of Haddon Hall, Derbyshire, submitted under the motto "Unicus" [E. G. Wylie, Glasgow], and Certificates of Hon. Mention to the delineators of Somerset House, London, and the Pazzi Chapel, Santa Croce, Florence, submitted under the motto "Thames" [W. H. Hillyer, Shortlands] and the device of a Red Disk [A. R. H. Jackson, South Kensington, S.W.].

The Travelling Studentships.

(i.) *The Soane Medallion and* 100*l.*—Twelve designs for a royal palace were submitted. The Council have awarded the Medallion and (subject to the specified conditions) the sum of 100*l.* to the author of the design bearing the motto "Crumpets" [S. H. Maw, Bolton, Lancashire], and Certificates of Hon. Mention to the authors of the designs bearing the motto of "Benedick" [R. W. Pickering, Torrington-square, W.C.], and the device of a "Lion rampant" [W. S. A. Gordon, Chelsea].

(ii.) *The Owen Jones Studentship and* 100*l.*—Three applications were received for the Owen Jones Studentship from the following:—1. W. B. Brown, jun.:—6 strainers; 2. James McLachlan:—6 strainers; 3. Harry Morley:—6 strainers. The Council have awarded the Certificate and (subject to the specified conditions) the sum of 100*l.* to Mr. H. Morley, South Kensington, S.W.

(iii.) *The Pugin Studentship and* 40*l.*—Seven applications were received for the Pugin Studentship from the following:—1. A. R. Barker:—6 strainers; 2. Norman Culley:—5 strainers; 3. H. A. Dalrymple:—6 strainers; 4. Frank Dyer:—6 strainers; 5. E. Garratt:—6 strainers; 6. W. H. Godfrey:—6 strainers; 7. L. Wilkinson:—6 strainers. The Council have awarded the Medal and (subject to the specified conditions) the sum of 40*l.* to Mr. Ed. Garratt, Darlaston, near Birmingham, and a Certificate of Hon. Mention and 10*l.* 10*s.* to Mr. Hugh A. Dalrymple, Bloomsbury, W.C.

(iv.) *The Godwin Medal and* 65*l.*—One application was received for the Godwin Bursary, from Mr. F. R. Hiorns, of Wimbledon, S.W., and the Council have awarded to him the Medal and (subject to the specified conditions) the sum of 65*l.*

(v.) *The Tite Certificate and* 30*l.*—Nineteen designs for an hotel lounge and staircase were submitted. The Council have awarded the Certificate and (subject to the specified conditions) a sum of 30*l.* to the author of the design bearing the motto "Palladio" [R. Atkinson, Lenton, Nottingham], a Certificate of Hon. Mention and 5*l.* 5*s.* to the author of the design bearing the motto "E Angle" [A. G. Horsnell, Chelmsford, Essex], and a Certificate of Hon. Mention to the author of the design bearing the motto "Vista" [C. L. Wright, West Kensington, W.].

The Arthur Cates Prize: 40*l.*

Two applications for the Arthur Cates Prize were received from the following gentlemen:—1. Vincent Hooper:—6 strainers; 2. F. Winton Newman:—6 strainers. The Council have awarded the prize to Mr. F. Winton Newman, Hampstead, N.W., and a Certificate of Hon. Mention to Mr. Vincent Hooper, Redhill, Surrey.

Prize for Design and Construction.

The Grissell Gold Medal and 10*l.* 10*s.*—Five designs for a winter garden in iron and glass were submitted. The Council have awarded the Medal and 10*l.* 10*s.* to the author of the design bearing the motto "Onward" [J. A. M. Hunter, Portlethen, by Aberdeen].

The Ashpitel Prize, 1904.

The Council have, on the recommendation of the Board of Examiners (Architecture), awarded the Ashpitel Prize to Mr. C. L. Gill, Regent's Park, N.W. Mr. Gill was registered Probationer in 1901, Student in 1902, and passed the Final Examination in November, 1904.

The Travelling Students' Work.

Soane Medallist, 1903.—The Council have approved the drawings executed by Mr. Edwin F. Reynolds, who was awarded the Medallion in 1903, and who studied in Egypt, Greece, Italy, and Turkey.

Pugin Studentship, 1904.—The Council have approved the work of Mr. F. C. Mears who was elected Pugin Student for 1904, and who studied in Somersetshire.

The designs and drawings submitted for the Institute Prizes and Studentships are now on exhibition in the Gallery of the Alpine Club (entrance in Mill-street, Conduit-street, W.). The exhibition is open every day from 10 a.m. till 8 p.m., until it closes on February 4. The presentation of prizes takes place on Februray 6.

European Architecture in India.

Mr. James Ransome, consulting architect to the Government of India, then read a paper on "European Architecture in India," of which the following is an abstract:—

Referring to the tendency in recent years in India to erect buildings in the styles and upon the lines of those found to be suitable in England, the author said he proposed to demonstrate the obstacles which opposed this practice, and to stimulate discussion upon the advisability of its continuance as a principle. For though the dearth of good European buildings in India was undoubtedly largely due to the lack of proper architectural training in their designers, it was at least open to debate whether this deficiency might not be, in an even greater measure, the result of an insistence upon European traditions in the face of climatic opposition. To enable those who had not visited India to form an opinion on the subject the author described such of the main conditions as must necessarily influence its architecture. In this connexion he dealt with the cheap and abundant labour, the capacities of the native workman, the building materials and conditions influencing their use, climatic conditions, etc.

Except where earthquakes are of frequent occurrence, and in the case of buildings erected immediately after such disturbances, the possibility of their occurrence does not appear to have influenced the construction or designs of buildings; on the contrary, there seems to be a feeling that even the smaller buildings are incomplete without a tower, dome, minaret, or turret. Cyclones affect construction rather than design, while dust-storms render it advisable that all apertures ordinarily left open may be closed on occasions. In many districts the prevalence of flies necessitates the addition

of gauze shutters to every opening, which requires special treatment if it is to escape disfigurement.

A really water-tight roof is an unusual luxury in India, and as failure in this respect is attributed to the severity of the rains rather than the inefficiency of the roofs, but little effort has been made towards their improvement. Latterly pitched roofs have come increasingly into use, and though contrary to the traditions of the country, seem likely to survive the prejudices against them. It is something of a surprise to find that sheet iron, either corrugated or plain, is largely used for roof-coverings in India, since it offers but little resistance to the outside temperature, is very noisy and rarely water-tight during the rains, requires constant attention, has no lasting properties, and is always unsightly.

In a country where buildings are rarely to be seen except beneath a brilliant and cloudless sky, the influence of cast shadows calls for greater consideration than in places blessed with less sunshine ; hence much of the European work in India appears at its best only on the comparatively rare occasions when the sky is clouded. The native work is often richly inlaid with marbles, stones, and tiles, and when carving is employed externally it is usually in low relief. For the most part Indian bricks are of excellent colour and quality, and susceptible of sufficiently fine treatment. The bricks are rubbed so that their joints are hardly perceptible, and the whole of the face is finely carved. Such work is abundant in many of the native cities, and is still being executed, but unless encouraged by Europeans, will shortly cease to be practised.

Dealing with the temperature of India so far as it affects building designs the author classified the climate under three headings—viz., that of the Hills, that of the Plains, and that of the Coast, describing typical cases of each to convey an idea of the general conditions. The temperature of the Hills tallies so nearly with what we are accustomed to in this country that, so far as heat and cold are concerned, there is no reason why buildings suited to an English climate should not serve their purpose equally well if transplanted to the hills of India. Unfortunately, most of the buildings in the Hills have been designed by those accustomed to deal with the buildings in the Plains. Hence the type of building ordinarily found there has rooms opening into verandahs, which contain the staircases, and offer the only means of access from one room to another. In private dwellings it is customary to glaze these verandahs on account of the cold, and this treatment has the effect of restricting the light and air admitted into the living-rooms. These, in consequence, fall into disuse during the day, and are deserted in favour of the glazed verandahs, which have ordinarily the temperature of a hot-house during the day and are often bitterly cold at night. This unhealthy arrangement is probably responsible for much of the illness to which residents in the Hills are subject.

While the temperature of the Coast may be considered as uniformly hot, that of the Plains, though rising many degrees higher during the hottest days, falls considerably at night, and is some 30 degrees cooler in winter than in summer. Hence it is customary in the Plains to close all apertures and exclude the outside air during the hot days, while around the Coast, windows and doors are thrown open all the year round, and the windows are frequently left unglazed. In the older buildings these opposite conditions produced a marked difference in the plans of buildings for the Plains and those for the Coast ; for whereas the former were, as a rule, compact, with lofty rooms grouped around a large central apartment usually unlit by windows, the plans of buildings for the Coast were extended and arranged so that the rooms had as many outside walls as possible. In the more modern buildings this difference is less marked, for on the one hand the introduction of cooling by evaporation has opened out the plans of buildings for the Plains, while increased cost of building has curtailed the area of those for the Coast. As a rule, however, the older arrangements were more satisfactory, and it is not desirable that the conditions which gave rise to them should be overlooked.

But whether on the coast or inland the comfort of buildings in the plains of India is chiefly dependent upon the extent to which their walls are protected from the rays of the sun. Many of the European buildings are now built without verandahs ; but as their omission entails great discomfort, and ultimately results in the disfigurement of the building by various devices for protecting it from the sun, there can be no question as to the necessity for verandahs around the external walls of every habitable room except those facing north. It follows, therefore, that the appearance of an Indian building must necessarily be largely dependent upon the treatment given to its verandahs, and one of the chief difficulties in this connexion is that of exposing a sufficient feeling of solidity in a building of which so large a proportion of its main walls must be concealed.

It would probably occur to most architects that these conditions should be favourable to the employment of classic colonnades ; and that this was the opinion of the designers of the early European buildings is demonstrated by the fact that nearly all of them were thus treated. The author went on to show, however, that the application of classic architecture to Indian buildings was attended with difficulties, and that the achievement of a successful Gothic building under conditions which entailed the concealment of its windows was an even greater problem. In ecclesiastical buildings it has been the custom to indulge Gothic traditions at the expense of any considerations of climate. No advantage appears to have been taken of the natural adaptability of cloisters to serve the purpose of verandahs, which are usually omitted from designs for churches, and large, unprotected east-and-west windows are frequently introduced : hence Indian churches are, for the most part, unbearably hot, and frequently useless for purposes of worship during the hot weather. The author referred, however, to an effective arrangement in the Cathedral at Allahabad (Sir Wm. Emerson, architect), where the windows are in deep recesses and flanked by buttresses of considerable projection : this arrangement has the advantage of throwing the windows in shade during the greater part of the day.

In many of the modern designs for buildings attempts are made to follow the lines of native Indian architecture ; as a rule, however, not with very satisfactory results, as they are based upon a too perfunctory study of native work. Considering it inevitable, and probably desirable, that European architecture in India should be influenced by the native styles of the country, the author went on to give a rough outline of their chief characteristics and some illustration of the designs they have inspired.

For this purpose Indian architecture may be broadly classified under two heads—viz., Hindu and Saracenic. Instances of satisfactory structural forms are rarely to be met with in Hindu work, which seems never to have shaken itself free of the timber and rock-cut traditions upon which it was based. Yet much of this work is covered with beautiful detail and enriched with refined and graceful ornament.

It is strange that such a monument to the power of simplicity as the Taj Mahal should stand in a country so much in need of the lesson it should teach, and the fact that its influence upon the architecture of the country is imperceptible is perhaps even more surprising. Much of its effect is undoubtedly due to the increased play of light and shade, induced by its walls meeting at obtuse angles—a form of treatment which might be applied more generally to the walls of verandahs without detriment to their utility, and with some advantage to their appearance ; for the excessive accentuation of right angles, produced by the brilliant sunlight of the plains, is not always beneficial to the appearance of a building. A dome is not ordinarily an economic form of roof, and it is not easy to find any useful employment for minarets and the little domed structures with which the roofs of Saracenic buildings are usually decorated, and which play so large a part in their composition. Nor is there much need in European buildings for the finely-pierced stone tracery which was extensively used in the windows and balconies of this style ; or for those curious and typical features known as Jhomkes, examples of which are to be found on the gateway of the Taj. On the other hand, the Chujja, or wide projecting slab cornice, which is one of the most characteristic features of Saracenic work, is exactly what is required to shelter clerestory windows and exposed walls. The Kingras, or ornamented battlements, many of which are of very beautiful design, can be introduced effectively in place of the European parapet, while the great variety of form in the Saracenic arches affords sufficient scope for judicious selection. The style is also rich in oriels and balconies, designed in admirable taste and executed with considerable skill.

In conclusion, the author referred to a competition recently instituted in which architects practising in England were invited to submit drawings illustrating their suggestions for the external treatment of a block of offices in India, of which a plan was supplied. Certain stipulations were made with a view to ensuring that the designs should be suited to the climatic conditions of the plains of India. Although no stipulations were made as to the style of architecture which should be followed, in no instance was any attempt made to adhere to European traditions.

Mr. Hugh Chisholm said it fell to him that evening, as perhaps the oldest living architect practising in India, to propose a vote of thanks to Mr. Ransome for the able and interesting paper he had given. It was able and interesting for the reason that it went over a large surface in as few words as possible and represented with great fairness and impartiality an exceedingly difficult subject, viz., the treatment of modern architecture in India from the Anglo-Saxon point of view. As he had practised in India for upwards of thirty-five years he could say that he had never heard anyone attack so difficult a subject in such an able way, because Mr. Ransome had avoided treading on anyone's toes ; but he had placed before them the one great difficulty in all Anglo-Indian architecture, which was the treatment of the external wall. The difficulty was to avoid on the one hand having an external wall so open that the building appeared to be a mere cage of architecture, frequently only half concealing the more solid building behind with no architectural pretensions at all ; and on the other hand to gain dignity by the exposure of a large surface of wall without detriment and inconvenience to the people who lived in these buildings. This was the great problem in Indian architecture, and he did not think that so far it had been fairly met. Of course, that was merely his own private view. With regard to the division of the whole of India into two great classes—Hindu and Saracenic—that was so far true, but it must be remembered at the same time that India had imbibed its arts, including architecture, from five different sources. First from China on the north-west came a wave of art through Tibet and Nepaul ; from the same source came a wave of architecture into the south-east of India greatly modified in its travels through Burma and the Straits ; thirdly came a wave of architecture from Egypt and Arabia ; fourthly came a wave of architecture from the north-west frontier through Arabia and Persia ; and lastly came that very curious Byzantine wave which greatly modified all the native architecture of India and culminated in that building of wonderful beauty, the Taj Mahal. He thoroughly endorsed Mr. Ransome's statement that no photograph conveyed the slightest idea of what this building looked like. It was really spiritual. They might just as well take a beautiful child with rosy cheeks, blue eyes, and golden hair, and attempt to show what she was like by photography. Now, all these styles which he had noted spread out like fans and overlapped each other and modified each other, so that it would be seen that although Hindu and Saracenic divided the architecture of India into two definite classes, yet they did not go further than the division of all European architecture into Gothic and Classic. With regard to the modern treatment of buildings—as to how far they should be Indian and how far European—this was a very difficult question to settle, and at the expense of his reputation he had discarded style in all his buildings beyond what he could get out of the natives on the spot, and he felt it would be a good rule for anyone practising in India to accept the local materials and to do the best they could with local labour, working on the traditions of Indian art, and to observe also the golden rule that the amount of ornamentation they put on the building should not exceed in ratio the value of the materials which exposed that ornament. He understood Mr. Ransome to say that the dome was not an economical form of construction, but he must disagree with him there. The cost of the dome lay chiefly in the cost of centring. The centring

was the expensive part of the dome, but if the dome was turned on true Hindu principles, without the centre, the cost of doming was little more than the cost of walling, and that the dome could be so treated he had practical experience of, because he had domes varying from 16 ft. up to 72 ft. in diameter and had never had an accident of any kind. In one case where he was turning a very flat dome there were horizontal rings, and they opened at the back, but he grouted up, and the dome was perfectly stable.

Mr. John Slater, in seconding the vote of thanks, said he could lay no claim to having had any practical experience of work in India, but he remembered, nearly forty years ago, when he was a pupil of the late Professor R. Smith, he had the advantage of seeing the drawings which he had made for some buildings in India. It was interesting to note what Mr. Ransome had said with regard to the natural building materials in India, because it could not fail to have struck anyone who had seen and known anything about Sir W. Emerson's design for the Victoria Memorial in Calcutta that he had gone to the expense of having marble from Greece for that building, which he ventured to think would be a very magnificent addition to all the buildings in Calcutta. It might be interesting to some members of the Institute to know that the great Gothic genius, Wm. Burges, in 1866 or 1867, designed a building for Bombay which was to be the School of Art there. The building was very roughly illustrated in a paper read before the Institute in 1867, and it was certainly very interesting to notice how the genius of Burges showed itself in the new conditions he had to work under in designing a building for a very hot climate. He believed the building was never carried out. At any rate, he knew that in the paper which Burges read on the building he finished up with these words: "Such is, or rather was, my scheme for a school of art in Bombay. I say 'was,' because the last advices (unofficial) from India tell me there is a report abroad that my scheme is to follow the fate of so many other schemes, viz., that it is to be put into the hands of military engineers, who are to perpetrate a copy of the building which we all so much admire at South Kensington." He happened to look that up that day, and thought it would be interesting to the meeting to know that so long as forty years ago this design had been made. Probably Mr. Chisholm would know whether it had been carried out. [Mr. Chisholm said it had not.] With regard to some of the practical points which had been touched upon as to roofs, he did not know whether anyone had tried in India the use of slag wool for keeping out the heat. He could not help thinking that in a hot climate this stuff, which was absolutely immune from the attacks of insects of all kinds, would be extremely useful, and might be used with great advantage. As to the ventilation of roofs, surely there would be no difficulty in having space between the top ceiling and the roof proper, through which the air could circulate, which should have some effect in mitigating the heat which beat upon the house. It was curious to learn that very much the same tricks were used in India with regard to pointing that they got in England. Mr. Ransome told them that the mortar when wet was so much the colour of the brick that the joints were absolutely concealed, and the workman ruled the joints according to his own fancy. They saw much the same thing in London, where the abominable practice of tuck joints existed. The walls were smeared over and the lines ruled independent of the joints. It was rather interesting to hear what Mr. Ransome had said as to the height of the verandahs. He said they must not be raised too high or the sun got in and heated the underground rooms. He remembered when Professor Smith read a paper before the Institute in 1868 or 1869 on European architecture in India he said the verandahs outside a building ought to be the full height. He supposed that practical experience had shown this was not a desirable thing. The subject was a very interesting one, and whatever they might think of the artistic character of some of the buildings illustrated, at any rate, they were exceedingly interesting.

Mr. W. H. Atkin Berry said he could not help feeling that it was impossible to appreciate fully the points of the subject without some knowledge of the country of India. It was his good fortune some years ago to visit India and to travel a little about the country, and although he had not full opportunities for actually studying the architecture there he, of course, received some impressions, although many have been but passing impressions. One impression he very strongly received was that all attempts at European architecture there were too dreadfully European. He did not say that in any way in disparagement of the works of those who had attempted European architecture, but as showing to his mind that it was a fatal thing to attempt to transplant the characteristics of another clime and country to one so entirely different as India. Of course, apart from that there were many works in India by Europeans which were not in any sense deserving of the term architecture. They were buildings. He thought a great deal of that was due to these buildings having been carried out by men who had no pretensions whatever to training as architects. It was well known that engineers had done a tremendous amount of building, nominally passing as architecture, but they knew what engineers' architecture was. He was not saying that unkindly. It was because engineers had had such a free hand in India that there were so many failures. On the other hand, he felt that if their best architects were to put forth their best efforts to make European characteristics a success in India they would fail. He believed that to be successful in India the architect must seriously study the traditional architecture of the country. It was a very difficult subject to grasp properly, but he believed that was an essential secret of success. They would have observed from the slides exhibited that many of the later works showed that architects were convinced of that fact, and that they had made efforts to study, and, while not exactly reproducing the traditional styles, designing in accordance with them, and as they had done so they had approached success. He would like to say a word on the subject of corrugated iron for roofs, and the dreadful practice of painting it red to "look like tiles." That was childish, and a failure, but he had seen corrugated iron treated very successfully in India, both in appearance, and from practical points of view. He had a vivid recollection of bungalows with corrugated iron, simply painted white, with the idea of keeping off the heat, and the effect æsthetically was very good indeed. As to hollow roofs and walls, Mr. Ransome seemed to imply that these things were unsuccessful in India, but he happened to know instances in India where it was very successful. With reference to these, he had always been under the impression that if they wanted an air-space proof against the variations of temperature they should endeavour to seal it, and not have a current pass through it. If they could confine the air they made it a non-conducing cushion. He entirely agreed with Mr. Slater with regard to slag wool, and would be surprised if Mr. Ransome told them it was not used. It was a material of modern invention, and if it was not used in India, it might well be used. The slides which they had seen showed them what was a strong characteristic of native workmen, which was their extreme patience. They had no idea of hurry or impatience, and no idea of time, but would patiently work at intricate detail and never weary. As to the Taj Mahal he could only endorse the eloquent praise which had already been bestowed upon it; no photograph, drawing, painting, or model that he had ever seen conveyed the slightest idea of the great beauty of that building. One might stand for hours before that building entranced with its beauty, realising that which Mr. Ransome had put so aptly in the words "Power of simplicity." It was the power of simplicity that impressed one, and yet on close inspection they found the building would bear examination almost with a microscope, for the beauty and refinement and intricacy of its detail. On its broad lines, however, it was simplicity and power. He was a little disappointed that Mr. Ransome did not give them the benefit of a little more description of the bungalows of India on the hill stations. Perhaps he was confining himself to the more monumental subjects, but to architects in England, who were much interested in domestic architecture as applied to the Englishman's home, there was in the residential bungalow of India a most interesting subject. Many of the little hill bungalows he had seen erected without conscious effort seemed to have struck the thing naturally. A great many of these little bungalows were really most effective, but, again, there was absolute simplicity. There was no straining after effect. Like much of the picturesqueness of English villages, it seemed the outcome of the natural desire of men to accomplish something in simple work. A great many of these bungalows were entirely the work of Europeans as regarded design.

Mr. Seth Smith said the subject had been handled by Mr. Ransome chiefly to illustrate the civil architecture of India, and not the domestic, and therefore Mr. Atkin Berry's desire might have the advantage of inducing Mr. Ransome to come again and give some information on that particular subject. In relation to civil architecture, he questioned very much whether there was any great advantage in endeavouring to copy or to develope the indigenous styles of architecture, for these styles were almost entirely ecclesiastical. Nearly the whole of the Hindu architecture was in temples, tombs, and palaces, but the palaces were not great in number, and were principally in Benares. He would be glad to hear Mr. Ransome's opinion on the point whether it was any use European architects attempting to work on the traditional lines of Hindu architecture, or would it not be better if they set aside all tradition and endeavoured to treat the thing from a scientific point of view in accordance with the conditions which were necessary? He would also like, if possible, to be referred to some source of information which would enable them to understand the construction of domes in that simple manner of which Mr. Chisholm spoke.

The Chairman suggested that Mr. Chisholm might briefly describe the construction of the dome.

Mr. Chisholm said the dome, after it was tied at the bottom with a circular tie, was perfectly stable, as they went on ring by ring. It was just like a number of men standing in a circle and leaning against each other. As long as their feet were against something to prevent them slipping they could lean down a considerable way. The moment the dome was closed in the middle it became stable. It was not quite stable as they went on with it, because of the elasticity of the material. It was, however, very simple. He had a half-dome going on now, which the bricklayers refused to turn out first without a centre, but when he explained it to them they went on. A half-dome was a little more difficult than a whole dome, because it did exert a thrust out until it was closed. The moment it was closed it became an arch, but during the process there was a little angle which had a tendency to fall out. If they had a good arch to take the thrust that was just as stable as a circular dome. He explained all this before the Institute a great many years ago, but it had been forgotten.

Mr. Hudson said that Mr. Seth Smith had referred to the desirability of adopting the style of the country of many years ago. It struck him that, as conquerors of India, were they making upon that soil the impress of their occupation, so that in generations to come, when these buildings were ruins, there would be the same evidence of the British occupation as they had now in their own country? It was a point which he thought must have strong force, in regard to the adoption of the traditional style, and carrying it out in the way they had. If they were not to adopt the traditional style, what was the alternative? What could they adopt as their own style at the present day to mark that impress on the soil of India?

Mr. Seth Smith asked if Mr. Ransome would give his opinion on the merits of the various competitive designs he had shown on the screen? It appeared to him that some were very beautiful and very suitable to the conditions.

The Chairman was afraid that if Mr. Ransome were to accede to the request it would lead to a long discussion afterwards.

Mr. Ransome said he thought there was insufficient time to deal with the question of competitive drawings. He thanked them for the attention they had given the paper, and was gratified that they had found it interesting. He was afraid that they might have found it a little dry, and it was a relief to him to find they were interested, while the discussion which had taken place had been of considerable use. In India they suffered from lack of discussion and lack of interest. People took up a design and said it was either ugly or pretty, but took no further interest in it. If asked why they thought it was ugly or pretty they thought that had nothing to do with the subject. If it pleased them it was good architecture, and

if it did not please them it was not. The question of the desirability of copying native work was a very difficult one indeed. He felt himself that as they occupied India they ought to leave their mark, but he also felt they ought not to leave their mark in the way they sometimes did. There was much in the native work which was very useful, and, even more, that was beautiful, and he thought they should always copy what was useful in the native work, even if the result was to make some mongrel of architecture. If they were patient in going on these lines, and working chiefly for use, and then trying to beautify, and put the style of architecture second, he thought in time they would arrive at something which would leave a satisfactory mark on their occupation of India. It was not one man's work, or twenty men's work, but, as with all other styles, it would have to grow. He had not touched upon bungalows because he could not agree that they were beautiful. He had been trying to recall beautiful bungalows, but could not. Sometimes they found an old roof left on, and if they had old shingles which had mellowed they looked very well, but he could not think of a modern one which was beautiful. He acquired one in Simla, and tried to make it beautiful, but was afraid that it was not. The only thing was to cover them with creepers, and then they looked very pretty. Europeans, in these days, spent very little time in India, and would not spend much money on the inside of their buildings. He had tried to find out instances of hollow walls in buildings in India, but had not been successful. Of course, there were double roofs, but that was not what he meant. He was talking of the ordinary flat concrete roof which was, as a rule, solid and thin. He thought if two thicknesses of concrete could be introduced that would undoubtedly lessen the temperature transmitted through the roof, but the feeling in India was that unless they ventilated the hollow space they would get no advantage from it. As regarded slag wool, it was not much used. It would be an excellent thing to put in, but things went very slowly in India, and he had never heard of it being used there. With reference to his remark about domes, he referred more to the restriction which the domed roof very often placed upon the plan. Given a certain square area to cover over, then the dome was an economical form of roof, but if they had to scheme the plan to cover the whole of the space with domes that was another matter.

The vote of thanks was heartily agreed to.

The Chairman announced that the next meeting would be held on Monday, February 6, when the President would deliver his address to students and present the prizes, and Mr. A. N. Prentice would deliver a criticism of the drawings submitted.

METHODS IN AMERICAN WORKSHOPS.*

THE very best of these workshops, with possibly one exception, could be matched in equipment and in general methods of carrying out work by single works in this country. Some of them were in no way in advance of ordinary practice here. In general, however, the organisation of an engineer's workshop in America struck the author as superior to that in similar works in England, whilst in some the organisation was in every detail admirably thought out and administered. In a modern business an American begins to make one particular machine or particular kind of machine. His whole energy is, in the first instance, concentrated upon making this machine superior to anything at the time upon the market. More than with us, he thinks that natural ability is aided by the best scientific knowledge in the design of the machine to be produced. . . .

An American employer will see that his workmen have no reason to use their time for any purpose in which they are not skilled. His foremen will do no clerk's work. His machine men will not be grinders of tools nor designers and constructors of methods for holding and machining the work. A machine minder's business is to keep his machine moving and his tools cutting every minute of the day that is possible. It is relegated to others to design, to grind, to fetch and carry his tools, to prepare chucks, jigs, and everything requisite, so that they may be ready to the workman's hand at the time they are wanted; and to his foreman is relegated the chief duty of seeing that the work is quickly and correctly done. It would be instructive to some here to know what proportion of the time of a factory's running is used by any given machine in actually performing the work it is designed to do. The author has seen a works where every separate job for every machine is ordered and arranged from the office staff, where every detail in the process of its machining is settled, and the number of minutes each process must occupy is displayed before the article reaches the workman's hands. In such a works a liberal bonus is paid for a saving in time, and rigorous methods are in force against those who fail to carry out the work in the stipulated time. Such methods may appear harsh, but he believes that in practice they are not so, for they are the result of accurate experience gained by an expert staff, and they recognise the enormous difference, in industry and ability, that there is between different workmen. *The able man is allowed full play for his ability, and is rewarded by a very great increase in money earned over his slower or less industrious neighbour.** In the same way, by card processes, by clocks with dials divided into tenths and hundredths, are minutes saved which a workman uses in calculating his time, and which a clerk wastes in complicated addition and multiplication of figures. Persistent energy and patience have achieved remarkable results in the organisation of cheap production in some of these workshops. This, the author thinks, is the chief difference, stated in general terms, between English and American workshop practice. In this country they are somewhat wasteful of the workmen's time; in America they are careful of it to a remarkable extent. It follows that if American engineers shall compete successfully against English engineers, it will be, in his opinion, because the organisers of their businesses know their work, and carry it out better than do the organisers of businesses here. Their workmen are in no way superior, but their skill and ability are used to better advantage.

* From a short paper read by Mr. A. T. Gimson before the Institution of Mechanical Engineers, on the th inst.

* The italics are ours.—Ed.

THE BUILDERS' FOREMEN'S ASSOCIATION.

THE eleventh annual dinner of this Association was held on Saturday evening last week in the Venetian Chamber, Holborn Restaurant, W.C. Mr. W. H. Fitton (Bramley Engineering Co., Leeds) presided, supported by over 250 members and friends of the Association, amongst whom were Messrs. T. H. Armstrong, — Butler, E. Carter, — Coxon, T. Faldo, J. H. Harding, W. A. Harford, — McCutcheon, B. T. Price, — Salter, — Shouler, — Stevenson, R. N. Taylor (President), Thompson, Antill, and Squires, and W. Cook (Secretary).

The loyal toasts having been honoured,

The Chairman proposed "The Builders' Foremen's Association." Having spoken of the antiquity of the building craft and presumably of the work of the foreman, he said that the first object of the Association was to bring together the members in friendly and social intercourse, which seemed to him a very laudable object; the next was to improve the status and dignity of the builder's foreman, while other objects were: to assist in finding employment for members who required it; to give lectures which would be useful to members in their work, and to institute a penson fund—a most important part of their work, it seemed to him. It was impossible unless they were united and joined together that these objects could be carried out, but he was glad to find that the Association had been in existence eleven years. In 1902 they had a cash balance of 204*l.*, which, at the end of 1904, had been increased to 402*l.*; and during the two years the increase in membership had been 30. As to the pension fund, it seemed to him to be the most important part of the whole undertaking. It was proposed that the fund should be to help those who had not less than 15 years of membership and who at the age of 65 should be unable to do more work. He thought that the age limit should be reduced somewhat, though that was a financial matter which must be left to the Committee. A satisfactory cash nucleus had been formed in this connexion, and the profits of the social functions were devoted to this pension fund, but in addition to that he thought there ought to be a levee on the members. As an honorary member he would be glad to pay his share towards more rapidly increasing the amount of the fund. He appealed to them for subscriptions and help to carry on the good work of the Association, and he did so with pleasure, because he saw from the data which had been supplied him that the Association was worked on a very sound basis, and it was a pleasure to help those who helped themselves. For that reason he would be glad to give them 25*l.*, and if that was not sufficient they must come again. Their Quarterly Report seemed to embody all that was necessary in any such statement and it enabled country members to see exactly what was being done. The prospects of the Association were good, and all they needed was a little kindly help. In addition to financial help, it would be a good thing if each member during the next twelve months determined to nominate someone for membership, and as their chairman he undertook to do so.

Mr. Taylor, President, in response, said that anyone requiring a foreman would get as good a man from the Association as they would anywhere else. The Association was not a trades' union in the ordinary sense of the term, but an Association for promoting the efficiency of builders' foremen and for rendering one another mutual assistance. The first object they endeavoured to obtain by means of lectures and visits to works in progress and the interchange of ideas at the monthly meetings. The second object they endeavoured to attain by means of a contingent fund for the purpose of granting assistance to members when they were out of employment by means of advertisements. There were also funeral benefits and the pension scheme. The past year had been a very successful one and members and funds had steadily increased. Foremen who were not members ought not to fear to join the Association when they realised the amounts of the funds, and the Secretary would be pleased to give information to all those disposed to join. Thanks to the energy of Mr. Price, who started the scheme, the pension fund now stood at 64*l.* plus contributions from the smoking concerts and the Chairman, and he appealed to them for further help.

Mr. B. T. Price then proposed "The Building Trades." The trade had had a good many ups and downs, he said, and it was now passing through a time of great depression. The building trade was to a great extent dependent on the condition of trade throughout the country, and he hoped there would be a great improvement in trade all round. Before concluding he should like to refer to a matter that was mentioned at their last dinner, *i.e.*, as to American methods and ideas in regard to building. Some of these methods had been put before them in London and elsewhere, and it was peculiar that the tall talk they used to hear as to these American methods had ceased, and they heard nothing now of American methods, being superior to English ones. As a foremen's association, they were ready to learn and to adapt themselves to new conditions and methods, but they were conservative enough to stick to the old methods until they were assured that the new ones were better.

Mr. T. Faldo, who responded, said there was no doubt that there were many ups and downs in the building trade, and they might almost call the trade the pendulum of prosperity. The political situation had a good deal to do with trade and it was long since there had been such an upset in the political world as there was at the present time. As to American methods, there was not a respectable foreman belonging to the Association who would put a building up on American methods. Mr. Price said he was ready to learn. If they had anything more to learn they would not learn it from the Americans. The American invasion was past; there was nothing of it now in London. Since the Association had been started, the status of foremen had been considerably raised.

Mr. E. Carter then suitably proposed "The Chairman," and Mr. Fitton briefly replied.

The concluding toast was "The Visitors," proposed by Mr. W. A. Harford and acknowledged by Mr. T. H. Armstrong.

During the evening subscriptions to the amount of nearly 50*l.* towards the pension fund were announced.

THEOBALDS *v.* CLEMENTS. — **Mr. Henry Theobald, F.S.I., of 6, South-place, Finsbury Pavement, desires us to state that he is not the surveyor who was plaintiff in the recent action of Theobalds *v.* Clements, nor is he in any way related to him.**

THE SURVEYORS' INSTITUTION.

THE following is the list of candidates who have passed the recent Students' Preliminary Examination. Of the candidates who presented themselves at the examination, held concurrently in London, Manchester, and Glasgow, on January 11 and 12, the following satisfied the examiners :—

Affleck, J. C. C., High Wycombe.
Armstrong, R. E., Warninglid, Sussex.
Ashenden, H. W., Smeeth, Ashford.
Bagshaw, N. B., Kettering.
Baines, W. H., Burslem.
Balcomb, C. A., Boscombe.
Balls, V. H., Hampstead, N.W.
Bare, A. R., Bloomsbury-square, W.C.
Batzer, A. E., Wallington, Surrey,
Baxter, A. S., Wandsworth Common, S.W.
Bayley, L. W., Cheltenham.
Beckham, A. A., Clapham Junction, S.W.
Biggs, W. W., London.
Bishop, H. S. C., Swindon.
Bosker, W. L., Wrexham.
Bott, W. A., Burslem.
Brassey, R. E., Bulkeley Grange, near Malpas.
Buck, E. M., Worcester.
Budge, C. S. G., Parkstone.
Burt, H. S., Eastbourne.
Carpenter, R. H., Burgess Hill.
Chapman, J. F., Leicester-square, W.C.
*Clarke, J. H., Bedford.
Cowell, N., Canterbury.
Davis, J., Gargrave, near Leeds.
Daw, H. W., Brixton, S.W.
Deane, H. C., junr., Worcester Park.
De Jersey, J. H. R., Midhurst.
Dixon, I., Wavertree, Liverpool.
Drew, R. C., junr., Bournemouth.
Duke, H. E., Sherborne.
Ebbutt, A. C., Croydon.
Evans, G. L. B., Maescurig, Llangurig.
Gardner, H., junr., Poulton-le-Fylde.
Gardner, P. S., Regent's Park, N.W.
Gibbins, T. S., Titchfield, Fareham.
Godwin, C. F., Dorking.
Godwin-Austen, R. A., Great Missenden.
Greenough, H., Wibsey, Bradford.
Griffith, F. S., Muswell Hill, N.
Harston, W. E., Norwich.
Hedley, T. F., Sunderland.
Hobbs, W. E., Brighton.
Holford, S., Stratford, E.
Hosken, W., East Grinstead.
Hovenden, J. R., West Dulwich, S.E.
Howard, G. W. F., New Buckingham, Attleborough.
Jennings, G. A., Kingston Hill.
Jones, F. C., Oxford.
Jones, M. W., Oxford.
Knight, R., Blackheath, Kent.
Lee, L. H., Ashford, Kent.
Leigh, L. A. A., Wargrave.
Lloyd, S. H., Poole.
Luff, E. S., Weston-super-Mare.
Lud, H. W., Taunton.
Mair, W. F., Stretford.
Martin, V. C., Ealing Common, W.
Moody, H. L., Ryde, Isle of Wight.
Palmer, F. C., East Sheen, Mortlake, S.W.
Polley, G., Plaistow, E.
Pulford, L. C., Addiscombe.
Roberts, J. T., Wrexham.
Roberts, R. L., Mold.
Rowett, F. J. L., Leytonstone.
Ruck, A., Swansea.
St. Quintin, C. J., Linton.
Sewell, F. H., Greenwich, S.E.
Seymour, G. H., Wimborne.
Sharp, W. A., Sutton.
Shepherd-Walwyn, J. E., Carlisle.
Smith, G. H., Ruloe, near Northwich.
Sparks, F. G., Bournemouth.
Steddy, H. C., Chiswick, W.
Stride, W. O., Newton Abbot.
Strudwick, L. H., Beulah Hill, Surrey.
Stubbs, R. A., Cheadle.
Tharp, R. C., Notting Hill, W.
Tresidder, H. E., Falmouth.
Trollope, F. H. M., Virginia Water.
Wadmore, E. A., Bridgwater.
Ward, R. C., Ipswich.
Westcott, T. D., High Wycombe.
Wood, A. E., Boscombe.
Woolley, M. T., Loughborough.

Scottish Candidate.

Grant, A., Edinburgh.

Irish Candidates.

Duggan, C. E., Rathmines.
Dunlop, C. J., Bray, Co. Wicklow.

* Head of List.

THE LONDON COUNTY COUNCIL.

THE first meeting of the London County Council after the Christmas recess was held on Tuesday in the County Hall, Spring-gardens, S.W., Mr. J. Williams Benn, Chairman, presiding.

The late Mr. Thomas Blashill.—Sir Melville Beachcroft said he thought the Council would like to be reminded that an old servant of the Council was that day being interred—he referred to Mr. Thomas Blashill who for a number of years had been the superintending architect of the Council. He thought the Council would not like the meeting to pass without an opportunity being accorded it of expressing its sense of appreciation of the services which the late Mr. Blashill had rendered to London at a particularly difficult time when the Works Department was being instituted.

Mr. J. Burns, M.P., said he desired to associate himself entirely with what had fallen from Sir M. Beachcroft.

These remarks were sympathetically received, and the Council passed to the ordinary business.

Loans.—On the recommendation of the Finance Committee, it was agreed to lend Fulham Borough Council 1,650*l.* for erecting conveniences; Hackney Borough Council 8,935*l.* for contribution towards cost of Mare-street improvement; and 8,900*l.* for sewer reconstruction works; Lambeth Guardians 21,360*l.* for poor law purposes; Paddington Guardians 8,340*l.* for a similar purpose; St. Pancras Borough Council 3,000*l.* for purchase of land for addition to cemetery; Stepney Borough Council 10,000*l.* for electric light installation; Stoke Newington Borough Council 1,000*l.* for contribution to cost of acquisition to Springfield-park; and Wandsworth Borough Council 12,436*l.* for paving works. Sanction was also given to the following loans:—Chelsea Borough Council 16,500*l.* for contribution towards the cost of Sloane-street improvement; Hammersmith Borough Council 300*l.* for advance under the Small Dwellings Acquisition Act, 1899; and St. Pancras Borough Council 5,370*l.* for electric light installation.

The Works Department.—The adjourned report of the Works Committee, bringing up the reports of the Bridges, Fire Brigade, Highways and Housing of the Working Classes Committees, and submitting statements of works completed during the half-year ended September 30, 1904, was then considered.

In statement I. are included accounts for works, completed in the half-year, in respect of which complete specifications and bills of quantities have been prepared. On a few of these works some small expenditure has been incurred after September 30 last, but all such expenditure has been brought into account. In addition to the works included in the statement, the undermentioned works, representing about 67,700*l.*, were completed by September 30, 1904:—Bourne estate—Artisans' dwellings on Clerkenwell-road and Leather-lane frontages—Sections 1 and 2; Kingsway—Paving, etc., works at Kean-Street; Aldwych—Paving works at Catherine-street, etc.; Aldwych—Western portion—Paving works. . . . The net result of execution of the works included is a balance of cost below final certificate of 10,674*l.* 3s. 3d., or 10·88 per cent. on the total of the final certificates. Ten out of the eleven works have been carried out at a cost below final certificate. The total of the accepted estimates for the works in the statement amounts to 104,208*l.*, while the total of the final certificates is 98,062*l.* 16s. 10d. The total of the accepted estimates considerably exceeds the total of the final certificates. In this case the excess amounts to 6,145*l.* 3s. 2d., or 6·26 per cent. The actual cost of the works in statement I. is 87,388*l.* 13s. 7d., or 16,819*l.* 6s. 5d. below the accepted estimates; in other words, the cost to the Council of the execution of the works is less by 16,819*l.* 6s. 5d. than was anticipated, and the Council was prepared to pay. . . . The total cost of the works included in the statements now presented does not represent the turnover of the department, because much of the expenditure on these works occurred previous to the half-year in question, while, on the other hand, much of the expenditure during the six months was upon works which are still unfinished. The approximate expenditure on works executed by the department during the half-year was 252,700*l.*, as compared with 232,000*l.* in the previous half-year. The Works Committee further reported as follows:—"The number of works in respect of which full specifications, bills of quantities, etc., have been prepared, and which have been referred to us for execution and not yet included in the half-yearly statements of completed works submitted to the Council, is thirty, representing an estimated expenditure of approximately 1,390,000*l.* In addition, works representing about 2,700*l.* is being carried out on the basis of actual cost, and works to the value of 56,800*l.* have been accepted by us, but not yet referred to us by the Council for execution. As required by the standing order, we report that, so far as can at present be foreseen, we do not anticipate that the accepted estimates for any of the works in hand will be exceeded, except perhaps in the case of Old Kent-road fire-station and Poplar Technical Institute, the completion of both of which works has been delayed through causes not entirely under our control. This delay may possibly necessitate our having to report a slight excess over the amounts voted. We reported on June 28, 1904, that we had fixed at 1¼ and 3¼ respectively the percentages to be added, to cover general and establishment charges, to the expenditure on wages and materials charged to each estimated work completed subsequent to March 31, 1904. These percentages were fixed with due regard to the then estimated expenditure of the department for the year 1904-5; but it is now anticipated that the expenditure for the year will be higher than was estimated at the beginning of the year, the enlargement of the northern and southern high level sewers being to a great extent responsible for this increase. We are glad to be able to report that this estimated increase has enabled us to reduce the percentages to be added to the expenditure on wages and materials charged to each estimated work completed during the year in respect of general and establishment charges, from 1¼ to 3¼, as reported on June 28, 1904, to 1 and 3 respectively."

Mr. E. White congratulated the committee on a brighter state of affairs, but took exception to the large amount of completed work not yet reported upon. When, however, the committee claimed to have saved 10,000*l.*, it ought to be remembered that this kind of work could be done 15 to 20 per cent. cheaper than was the case a few years ago.

Vauxhall-bridge—Erection of Superstructure.—The Bridges Committee reported as follows:—

"On July 5, 1904, we reported on the progress made by Mr. C. Wall under his contract for the erection of the superstructure of Vauxhall-bridge. Since that date we have been in constant communication with Mr. Wall with the object of accelerating the progress made by him, which in our opinion is very unsatisfactory. The tender of Mr. Wall was accepted by the Council on October 20, 1903, and the formal order to commence work was given him on January 1, 1904. Under the terms of the contract the bridge should be completed by December 31, 1905; but having regard to the progress that has already been made, and to the means at present provided by the contractor for carrying on the work, we do not think it probable that the bridge can be completed within the specified time. If this is to be done, efforts of a very special character will be necessary on the contractor's part, and more adequate and up-to-date machinery must be provided on the works, but up to the present he has not seemed at all willing to take steps in this direction. The Council will, perhaps, more clearly understand the position of affairs when it learns that, although more than one-half of the contract time has elapsed, the total value of the work executed on the bridge site is only 25,600*l.*, or barely 22 per cent. of the contract sum, excluding provision money, of 117,082*l.*, and the greater part of the more difficult work still remains to be done."

Erection of Shelters Over the Public Way.—The following recommendations of the Building Act Committee were brought up:—

The erection of an iron and glass shelter at the Bedford Palace of Varieties, High-street, Camden-town, to abut upon Mary's-terrace (Mr. B. Crewe).—Consent. An iron and glass shelter at the entrance to Bechstein-hall, Wigmore-street, St. Marylebone (Mr. W. Cave for Mr. E. Bechstein).—Consent. An iron and glass shelter at the entrance to the French Hospital and Dispensary on the west side of Great St. Andrew-street, Holborn (Mr. W. Woodward).—Refused. An iron and glass shelter at the entrance to the Café Royal on the east side of Air-street, Regent-street (Mr. W. Woodward for Madame C. de Nicols).—Refused. An iron and glass shelter over the entrance to the "South London Palace" music-hall on the east side of London-road, Southwark, northward of Ontario-street (Messrs. Wylson & Long for the directors of the "South London Palace" music-hall).—Refused.

Charing Cross Station.—The joint report of the Bridges and Improvements Committees on the proposal that the Council should acquire Charing-cross Railway Station for the purpose of widening Hungerford Bridge, and linking up the north and south systems of electric trams, was to the effect that, in view of the very large expense involved, and also having regard to the attitude of the railway company, they felt that they had no alternative but to advise the Council for the present not to give further consideration to the matter. This course was adopted without discussion, and the reference was discharged.

Housing the Working Classes.—Mr. Bruce, the Chairman of the Housing of the Working Classes Committee, stated that his Committee had in progress housing schemes for providing accommodation for 6,730 persons, at an estimated cost of buildings and plans of 322,069*l.* Buildings about to be commenced would accommodate 6,128 persons, at an estimated cost of buildings of 301,828*l.*, and the estates still remaining to be developed would provide, approximately, accommodation for 51,782 persons, at an estimated cost of buildings and plans of 2,298,695*l.*

The Committee recommended, and it was agreed, that the estimate of 500*l.* submitted by the Finance Committee be approved; and that expenditure not exceeding that amount be sanctioned in respect of the preparation of working drawings and bills of quantities for the dwellings proposed to be erected on a site in New King's-road, Fulham, for the accommodation of persons to be displaced by the Fulham-palace-road and High-street, Fulham, Improvement.

Holborn to Strand—Kingsway.—The Improvements Committee reported that they had considered several offers for a lease of lot 8, Kingsway. The most favourable of these was that by Mr. Owen Owen, who was prepared to take the property for a term of 99 years at a ground rent of 600*l.* per annum. The property has an area of about 2,340 sq. ft., and has frontages of about 23 ft. to Great Queen-street, about 34 ft. to Parker-street, and about 84 ft. to

Kingsway. They recommended accordingly and it was agreed.

Mr. White congratulated the Committee on the fact that they had at last disposed of one of the sites in the Kingsway, and suggested that it would be advisable that some of the remaining sites should be placed in the hands of some of the well-known firms of auctioneers.

Mr. Davies, in reply, said his Committee had no reason to complain of the way in which inquiries were coming in for these sites, and he saw no reason why any change should be made in the present arrangement.

The Council adjourned soon after seven o'clock.

APPLICATIONS UNDER THE LONDON BUILDING ACT, 1894.

THE London County Council at their meeting on Tuesday dealt with the following applications under the London Building Act, 1894. The names of applicants are given between parentheses :—

Lines of Frontage and Projections.

Marylebone West.—Rebuilding of Nos. 72, 73, 74, and 75, High-street, St. Marylebone, and No. 25, Nottingham-street (Mr. F. M. Elgood for Mr. J. A. Michell).—Consent.

Peckham.—That the application of Mr. E. J. Stevens for an extension of the period within which the erection of a one-story addition at the rear of No. 62, Queen's-road, Peckham, to abut upon Burchell-road, was required to be completed, be granted.—Consent.

Hammersmith.—An addition in front of the Latimer-road school, Hammersmith (Mr. T. J. Bailey for the Education Committee of the Council).—Consent.

Stepney.—Buildings upon the site of Nos. 133 and 135, Sidney-street, Mile-end (Messrs. G. Pearson & Son for Messrs. Isaacs & Samuel).—Consent.

Fulham.—A conservatory at the side of No. 42, Stevenage-road, Fulham, to abut upon Ellerby-street (Mr. J. Hawkins).—Consent.

Hammersmith.—Buildings on the north side of Uxbridge-road, to abut also upon the east side of Ormiston-road and west side of Bloemfontein-road, Hammersmith (Messrs. Palgrave & Co. for Mr. R. Le Butt).—Consent.

Islington, North.—Fence walls and gates, enclosing a yard at the southern end of Windermere-road, Islington (Mr. J. W. Stevens for Messrs. Knowlman Brothers).—Consent.

Kensington, South.—Two two-story oriel windows and a projecting stone hood over the doorway at No. 9, Young-street, High-street, Kensington (Mr. F. S. Chesterton).—Consent.

Lewisham.—Erection of No. 57, Sandrock-road, Lewisham, to abut upon Undercliff-road (Mr. W. H. Collier for Mr. H. J. Harrop).—Consent.

Lewisham.—Projecting wooden hoods over the doorways of two houses on the north side of Blackheath-rise, Lewisham, Westward of No. 1 (Messrs. Kennard Brothers).—Consent.

Marylebone, East.—An enclosure for bath-chairs and bicycles adjoining the main entrance to the Zoological Gardens, Outer Circle, Regent's-park (Messrs. Hudson & Hunt for the Zoological Society of London).—Consent.

Marylebone, East.†—A conservatory in front of No. 38, Finchley-road, St. Marylebone (Messrs. Anscombe & Ringland for Mrs. Lupton).—Consent.

St. George, Hanover-square.—That the application of Mr. R. Armstrong for an extension of the period within which the erection of a projecting porch at No. 6, Upper Brook-street, Grosvenor-square, St. George, Hanover-square, was required to be commenced, be granted.—Consent.

Wandsworth.—Dwelling-house on the north side of Hazelwell-road, Wandsworth, to abut upon Enmore-street (Mr. J. C. Radford for Mr. J. Tozer).—Consent.

Wandsworth.—That the application of Mr. C. De Gruchy, for an extension of the periods within which the erection of additions to the Union Church, Upper Richmond-road, Putney, was required to be commenced and completed, be granted.—Consent.

Lambeth, North.—A wooden building on the northern side of York-road, Lambeth, under the South-Eastern Railway bridge (Messrs. F. Chambers & Son for Mr. W. H. Hopton).—Refused.

Hammersmith.—A house on the north side of Dunraven-street, Hammersmith, to abut upon the east side of Adelaide-road (Messrs. Boyton, Sons, & Buckmaster for Mr. J. Allen).—Refused.

Lewisham.†—A building on the northern side of Ewhurst-road, Lewisham, to abut upon Salehurst-road (Mr. J. W. Webb).—Refused.

Lewisham.—A block of residential flats, at No. 155, High-street, Lewisham, of two bay-windows at the second and third floor levels, overhanging a roadway leading out of the southern side of High-street (Mr. C. A. Geen).—Refused.

Woolwich.—A wooden porch and verandah in front of "Blair Athol," Southwood-road West, New Eltham (Mr. R. Baker for the executors of the late Mr. R. C. Davis).—Refused.

Width of Way.

Camberwell, North.†—A one-story building on the north side of Diamond-street, Southampton-street, Camberwell, with external walls at less than the prescribed distance from the centre of the roadway of the street (Messrs. H. King & Son for Messrs. Jones & Co.).—Consent.

St. Pancras, East.—A one-story building at No. 57, Rochester-place, St. Pancras (Mr. J. B. Pinchbeck for Mr. P. Wilson).—Consent.

Greenwich.†—Forecourt fences in front of Nos. 19, 20 and 21, Queen-street, East Greenwich (Mr. J. Webster for Messrs. May & Roberts).—Consent.

Kensington, South.—Retention of a potting-shed at the rear of No. 26, Campden Hill-square, Kensington, with external walls at less than the prescribed distance from the centre of the roadway of Aubrey-walk (Mr. E. J. Burt).—Consent.

Width of Way and Lines of Frontage.

Finsbury, East.—A bay window at the nurses' home of the Royal Hospital for Diseases of the Chest, City-road, Finsbury, to abut upon Regent-street (Messrs. Young & Hall for the committee of the hospital).—Consent.

Westminster.—A deviation from the plans sanctioned for the erection of buildings on the west side of Regency-street, south side of Vincent-street, and east and west sides of Hide-place, Westminster, so far as relates to the erection of the Napier Memorial building, Hide-place, and Vincent-street with porches (Messrs. Law & Allen for the vicar and trustees of the Napier Memorial building).—Consent.

Woolwich.—An addition at the rear of No. 34, The Slade, Plumstead, to abut upon Elmgrove, with a boundary fence at less than the prescribed distance from the centre of the roadway of Elm-grove (Mr. W. Jolly for Mr. C. Terrell).—Refused.

St. Pancras, East.—That the Council do not accede to the request of Mr. G. Cox for Mr. W. Radcliffe for permission to retain a wood and class covered way at No. 142, Camden-road, St. Pancras, abutting upon Rochester-square.—Agreed.

Southwark, West.—A building on a site abutting upon the north-western side of Lambeth-road and southern side of Barbel-street (Messrs. H. F. Tasker & Slater for a community of Roman Catholic charitable ladies).—Refused.

Lines of Fronts and Temporary Buildings.

Wandsworth.—The retention of a wood and iron building on a site abutting upon the north side of Replingham-road and eastern side of Wimbledon Park-road (Messrs. Ryan & Penfold).—Consent.

Space at Rear.

Lewisham.—A modification of the provisions of section 41 with regard to open spaces about buildings, so far as relates to the proposed erection of two houses on the east side of Buckthorne-road, Crofton-park, Lewisham, with irregular open spaces at the rear (Messrs. Tompkins & Connew).—Consent.

Paddington, South.—A modification of the provisions of section 41 with regard to open spaces about buildings, so far as relates to the proposed erection of a building at No. 32, Westbourne-grove, Paddington (Mr. A. Young for Mr. J. Rossdale).—Consent.

St. Pancras.—A modification of the provisions of section 41 with regard to open spaces about buildings, so far as relates to the proposed erection of a building at the rear of the "Mother Red Cap" public-house, No. 174, High-street, Camden Town (Messrs. F. J. Eedle & Meyers for Mr. E. L. Summers).—Consent.

Formation of Streets.

Hampstead.†—That an order be issued to Messrs. Farebrother, Ellis, & Co. sanctioning the formation or laying out of a new street for carriage traffic to lead from Redington-road to Bracknell-gardens, Hampstead (Sir Spencer P. M. Maryon-Wilson, Bart.).—Consent.

Lewisham.—That an order be issued to Messrs. Owen & Ward, sanctioning the formation or laying out of a new street for foot traffic only, to lead out of the east side of High-street, Lewisham, to the north side of Limes-grove (Mr. W. Stephens).—Consent.

Greenwich.—That an order be issued to Mr. J. Farrer refusing to sanction the formation or laying out of a new street for carriage traffic out of Cedar-grove, Charlton (Mr. J. Lewis).—Refused.

Artisans' Dwellings.

Bermondsey.—A deviation from the plans sanctioned for the erection of blocks of intended dwelling-houses, to be inhabited by persons of the working-class, on a site on the south side of Abbey-street, Bermondsey, so far as relates to the erection of a one-story building upon part of one of the open spaces (Messrs. Humphreys-Davis & Co. for the South-Eastern Railway Company).—Consent.

Deviations from Certified Plans.

Kensington, South.—Deviations from the plans certified by the District Surveyor, under section 43 of the Act, so far as relates to the proposed erection of a building on the site of No. 20, James-street, Kensington-square, Kensington (Messrs. Crickmay & Sons for Mr. R. J. Bowerman).—Consent.

Building for the Supply of Electricity.

Norwood.—A transformer chamber at the generating station, Bengeworth-road, Loughborough Junction, Norwood (the South London Electric Supply Corporation, Ltd.).—Consent.

The recommendations marked † are contrary to the views of the local authority.

THE ARCHITECTURAL ASSOCIATION DISCUSSION SECTION.

THE sixth meeting of the session took place on Wednesday, January 11, when Mr. W. D. Belcher read a paper upon Fire Insurance Companies' Regulations, and an interesting discussion ensued.

Mr. Belcher confined himself in the main to stating what these regulations were, adding from time to time his views and experience upon the administration of them. He divided the paper under twelve heads, those being of most importance to architects dealing with height and cubical contents, walls and partitions, flues, openings in walls, floors, roofs, protection of structural metal work, linings and ceilings, and floor openings.

Mr. Stanley Hamp, in opening the discussion, asked if regulations were compulsory, and at the same time thought many of them useless, as, for instance, that dealing with fire-resisting doors, experience generally showing they failed in their purpose from various causes. He thought that private houses were in need of regulations in the same way as factories, and also regulations were required in the matter of providing hydrants in the streets.

Mr. Max Clarke said his experience of carrying out regulations of various companies had gone to show that, after doing everything suggested by the companies, the reduction in the rate for insurance did not pay for the additional outlay. He believed that well fires were even more responsible for fires in buildings than the register form spoken of by Mr. Belcher; and the following speaker, Mr. Louis Jacobs quoted as an example a case he knew of where the heat generated by a fireplace of this type was so great as to penetrate a wall fifteen inches in thickness altogether, and blister the paint upon a wood skirting board upon the opposite side of the wall.

Mr. A. H. Belcher asked for information as to the panelling to internal enclosures, and also as to the provision of a sheet-iron back hearth (the reader of the paper said that this was an error which had crept in in having the paper re-written). He suggested that the reason that factories were not built in the country was due to the heavy rates charged by the railway companies.

Mr. C. H. Brodie differed from this view, and thought that the question of obtaining labour was the main factor. He had found the rates of some of the fire insurance companies fearfully and wonderfully different, and quoted the fact that the rate for a modern building practically answering every requirement in Southampton-row, W.C., was greatly in excess of that charged for the old building in the Adelphi, and thought that benefit to the insurer would accrue by a healthy competition in rates amongst the companies.

Mr. J. Sheppard, of the North British Insurance Company, thought that architects should be willing to build as closely as possible to the insurance companies' regulations, not because the actual loss by fire was so great, but because loss of time in resuming business was in a very great measure counteracted, and nowadays time meant money.

Mr. A. E. Munby considered that tables

showing comparison between cost of companies' requirements and saving in rates of insurance were much to be desired—an opinion shared by all present.

The Chairman (Mr. H. Gregory Collins) then called upon Mr. E. O. Sachs, as "special visitor," to sum up the discussion.

Mr. Sachs opened his remarks by directing attention to the fact that fire insurance companies were not philanthropic institutions, and their method was to give a rate on the "risk" "as they find it" completed, and under no circumstances would they officially fix a rate before completion. He considered that too little thought was expended upon the question of vertical risk in the question of fires, and, regarding the proposed amended regulations of the new Building Act shortly to come before Parliament, he thought that the increase in compartment capacity, if allowed, would be a step backwards. As showing the divergence of views on fire questions, armoured doors, so popular with our insurance companies, were not officially allowed as fire-resisting doors in either Glasgow or Berlin—two cities where considerable attention was being paid to fire prevention. Sprinklers should be made much more use of. He considered that the companies gave a very liberal rebate for their use. Hard terra-cotta with thin webs was now generally recognised by those competent to judge as not a suitable material for giving full protection to structural ironwork. The need for some comprehensive scheme for power to cut off gas in case of a fire was shown by the recent fire in Piccadilly and the shop explosion in Southampton-row. The difficulty spoken of by Mr. Hamp, when alluding to the Paris Bazaar fire, in obtaining a quick supply of water when hydrants were at a considerable distance off, was capable of solution in a great measure by the use of chemical engines such as those employed by the Liverpool Fire Brigade. Mr. Sachs next explained the rate upon which the insurance companies subscribed to the London Metropolitan Fire Brigade. As some of the speakers had called attention to the possible danger of using the "well" type of fireplace in alterations of old mansions, he might state that he had been given to understand that the fire at Sandringham, in which the Queen had a narrow escape, was due to a fireplace of this kind. As to the suggestion of one speaker with regard to the cutting of rates, there were non-tariff companies, he believed, which did business on these lines, but with two or three notable exceptions they were not generally recognised as sound business institutions, and considerable risk was run in insuring with them.

Mr. W. D. Belcher briefly replied, and the meeting then terminated with an unanimous vote of thanks to Mr. Belcher and to Mr. Sachs.

ARCHITECTURAL SOCIETIES.

EDINBURGH ARCHITECTURAL ASSOCIATION.—At a meeting of the Edinburgh Architectural Association, held on the 18th inst. in the Association Rooms, George-street, Mr. H. O. Tarbolton presiding, a paper on "The Electric Lighting of a Country House" was read by Mr. Mathew Buchan. At the outset the lecturer pointed out that practically the only difference in the lighting of a town and a country house was in the method of supply. In the town they were supplied with a current from the public supply, whereas in the country a supply had to be made on the estate. Dealing with the interior of the house, he showed the different systems of tubing and wiring, and strongly advocated the iron or steel "draw-in" tube system. After describing the different methods of making electricity, Mr. Buchan concluded by giving an idea of the cost of the various systems.

YORK ARCHITECTURAL SOCIETY.—The annual dinner of the York Architectural Society was held on the 17th inst. in the White Swan Hotel, Pavement, when Mr. Herbert Davis, F.R.I.B.A., of Scarborough (President of the Society), occupied the chair. The loyal toasts having been honoured, the President delivered an address, in the course of which he said: When a young man, however eminent he may easily have become in any other profession, and whatever claims he may have to public confidence, becomes a member of our body, he has much to learn, and much to endure. Little does he know of what he will have to encounter. He may at the completion of his articles have received a thorough education as an architect, but he is unaware of the difficulties which must attend and embarrass every effort to render what he may know available and useful when he commences practice. He may be upright in all his dealings, and strong in the belief of his own integrity, but he cannot even dream of the ordeal to which he will be exposed, of how he will have to resist the temptations which will beset him, of that sensitive shrinking from undeserved censure, which he must learn to control; of the ever-recurring contest between a natural desire for public approbation and a sense of duty to his profession, of the injustice he must be content to meet with, even from his clients (who should be his friends), imputations on his motives, the sneers of ignorance and malice, all the manifold injuries which partisan and private malignity may shower upon his unprotected head. All this, if he would retain his integrity, he must learn to bear unmoved, and steadily uphold the objects and aims of his profession, sustained by the reflection that time may do him justice, and that his individual efforts and aspirations will be rewarded by the knowledge that he has tried his best, and that the evidence of the buildings which he will leave behind him, will do some little good to the following generations of architects and the architectural education of the public generally. I have always said that architecture is not, and never can be, placed in the same plane as the arts of sculpture and painting. The architect is too much fettered by the conditions under which he has to work to be called an artist pure and simple. When consideration is taken of the facts that there are by-laws to be complied with, local materials to be utilised, commercial considerations to be taken into account, and clients' wishes, however mistaken they may be, either combated with, or agreed to, I think you will agree with me that the practice of architecture is too fettered in its scope to be compared for a moment with the arts of the sculptor or the painter. It is the business of an architect first and foremost to give his client a building suitable for the purpose for which it is being built and also in addition, if the building is for business purposes, to ensure that his client is to receive a good yearly return for his outlay. When an architect has been successful so far (the majority of our profession as it now exists I am afraid say that it is far enough) then it is his duty to his profession to so clothe and shape the natural ugliness of his efforts that the final result will be received with delight by his brother architects, by something less than indifference by the public, and with at least tolerance by the sculptor and the painter. I think, gentlemen, that we may congratulate ourselves on the further developments of architecture during the year. In fact, the development during, say, the last ten years, has been so very remarkable, and it still continues to be so, that we shall have, very shortly, I hope, a national style which will stamp English architecture of this period wherever it may be built on the face of the earth. This development is due to my mind to the public at last realising the fact that architecture is a profession requiring the services of educated men, to conduct and direct the various trades and businesses which come under its management. . . . Now, I should like to say a word or two on a subject which is always cropping up in the public press, I mean that of illicit commissions. How is it that these accusations are made? To my mind it is not because of the real existence of them; they may exist, but if they do so, it is not to any great extent, and then only among a class of men who we as a body would scorn to call members of our profession. The reason, I think, is that so many architects are such horribly bad business men, that the mistakes made by them give rise in the minds of their clients to the thought that their interests from a business point of view are not being attended to, or that the laxity and indifference that is shown has some other underhand explanation. I do not believe that these commissions are offered, and much less received, to anything like the extent that we are led to suppose.—Mr. A. Pollard then proposed "The Royal Institute of British Architects and Allied Societies." He thought that they in the provinces were very much indebted to the Royal Institute for the way in which they had extended the hand of fellowship to them. They had taken in hand many knotty points, and had solved them for the benefit of the profession at large. They had sent out letters calling attention to the fact that in many towns and cities works of great magnitude were passed on to the borough engineers. Probably some of them might be capable of carrying out the work and doing it creditably, but he was within the mark when he said that 75 per cent. of the corporate surveyors were not equal to the task. It might be from a spirit of economy that the work was passed on to officials and for the saving the ratepayers' money, but how frequently was it the reverse? A few pounds was saved in commission, but it was spent ten times over in notifying mistakes, and it finished in a very unsatisfactory production. He trusted that the Royal Institute would not allow the question to stand where it was, and he would strongly recommend them going to the corporate bodies until they saw fit to give the work into the hands of professional men.—Mr. Butler Wilson responded, and referred to the registration of qualified architects. He had the honour to be a member of a Committee of the Institute formed for the preparation of a scheme for the statutory qualification of architects. That Committee was appointed in June of last year, and when he stated that many meetings of the Committee had been held and that a draft Bill was almost completed, they would see that in the interval the Committee had not been idle. The members of the Institute had returned a registrationist Council, and he thought that they should be informed that the Council which had held out pledges to the electorate, were agitating themselves keenly in the matter which they were returned to deal with. For his own part, he should never cease to use his best efforts in the cause of registration, and he felt sure that the same feeling actuated every member of the Council. Mr. Pollard had referred to the work of a Committee of which he (Mr. Butler Wilson) was a member, which dealt with the question of municipal surveyors and engineers being entrusted with architectural work, and the undesirability of work of that kind being placed in the hands of surveyors and engineers. That Committee had placed their report in the hands of the Council, and they had communicated with the municipal authorities throughout the country. As far as he knew no reply had been received, but that did not prevent the Council from pursuing the question. There could be no doubt that the question of architectural works being designed and executed by architects would have to be constantly pursued by the Institute if architects were to be properly represented.—Mr. R. P. Oglesby proposed "The York Architectural Society," and the President responded.

NOTTINGHAM ARCHITECTURAL SOCIETY.—The annual dinner of the members of the Nottingham Architectural Society at the Victoria Hall, on the 19th inst., was preceded by a business meeting, at which the principal subject under consideration was a proposal to support legislative action by the Royal Institute of British Architects to provide for the statutory qualification of architects. Lieutenant-Colonel A. W. Brewill, President of the Society, occupied the chair. The Chairman said the registration of architects was an important question, and a Bill was being drafted to lay before the Council and members of the R.I.B.A., ultimately to be submitted to Parliament to obtain statutory powers, under which in future all persons practising as architects should be duly qualified men. He introduced Mr. Cross and Mr. Hubbard, of London, to read papers on the subject. Mr. Alfred W. S. Cross, M.A. (Cantab), in the course of his paper, considered the present state of architecture and of the architectural profession; the Royal Institute of British Architects—what it had accomplished and where it had failed; the statutory qualifications of architects; and the reformed profession. To him it appeared that the present state of affairs was unsatisfactory, because while the works of modern architects sometimes displayed a certain amount of creative power and originality this attribute was very rarely found in combination with architectural scholarship, by which he meant an intelligent appreciation of the true principles that formed the foundation of styles and were exemplified in the glorious buildings of ancient Greece and Rome. The proposed scheme for closing the door of the profession to unqualified men by means of registration was due in a large measure to the Institute itself in having been indifferent to grievances of ordinary members who realised how difficult it was under existing conditions

to penalise unprincipled or unprofessional conduct.—Mr. George Hubbard, F.S.A., said, as a London practising architect and as a Fellow of the Council of the Royal Institute of British Architects, he was anxious to know what the feeling was in the provinces in respect to the registration of architects. It was essential that the Bill should be framed so as to embody the best and highest traditions and interests of the profession, both in London and the provinces. The profession was so constantly being recruited by the untrained and incompetent that, both for the sake of architecture and properly-trained men, steps should be taken to foster the one and protect the other. This could only be done by compelling those who aspired to practice to prove their qualification before being allowed to do so. Since the institution of a compulsory examination for Associates in 1882 there was no question as to the superior class of men who had joined the Institute or as to the character of their work. It must not be forgotten that an architect's work was a lasting monument which eloquently expressed not only the individual mind which conceived it, but it went to show the general civilisation of the nation. Every ignobly conceived and executed building tended to lower the general instincts of all beholders, whereas the refined work of the cultured architect was ennobling from generation to generation. He maintained that the R.I.B.A. was the proper body to bring a Bill forward.—After some discussion, on the motion of Mr. Bromley, seconded by Mr. Heazell, a resolution was agreed to in favour of registration.—At the annual dinner the President gave the loyal toast, which was duly honoured. Subsequently the toast of "The Master Builders' Association" was proposed by Mr. A. N. Bromley, and responded to by Mr. Fish. The toast of the evening, "The President and the Nottingham Architectural Society," was cordially proposed by Dr. Boobbyer, Medical Officer of Health for Nottingham. Proceeding to refer to legislation respecting underground bakehouses, he said after the law was passed action was taken in Nottingham by members of a sub-committee of the Corporation, the result being that 105 underground bakehouses were discovered, half of which could comply with the requirements and the other half could not. The committee undertook the inspection of the whole of these houses, and they were put into a satisfactory condition in the course of six months. There was hardly any disagreement on the part of the property owners with the decisions of the committee, and for his part he had to acknowledge having received a large amount of assistance from members of their profession. The President, in reply, said the feeling of friendliness among the members of the profession increased daily. The toast of "The Visitors," proposed by Mr. Sutton, and responded to by Mr. Cross and Mr. Hubbard, concluded the speech-making.

ARCHÆOLOGICAL SOCIETIES.

BRITISH ARCHÆOLOGICAL ASSOCIATION.—A meeting was held at the rooms in Sackville-street, Piccadilly, on Wednesday, the 18th inst., Dr. W. de Gray Birch, F.S.A., Treasurer, in the chair. A paper on "Norman Art and Architecture in Sicily" was read by the author, the Rev. Henry Cart. Perhaps a more correct title for the paper would be "Art and Architecture in Sicily under the Normans," as of purely Norman architecture, such as we are accustomed to see in England and in Normandy, there is very little, if any, to be found in Sicily. The principal Norman monuments, said Mr. Cart, are at and in the neighbourhood of Palermo, though throughout the island one comes unexpectedly on faint traces of the Norman occupation in the most unlikely and unlooked for places. In picturesque language Mr. Cart described the beauty of Palermo as seen from the harbour, the town, rising gently in a succession of terraces, studded with buildings, towers, and cupolas intermixed with groves of orange and lemon trees to the centre of a great amphitheatrical plain, whose wondrous fertility so impressed the Norman conquerors that they formed it into luxurious parks and gardens, and erected therein sumptuous palaces and summer pavilions and ornamental fountains of running water. One of these palaces called the Zisa is considered by some to resemble the Alhambra, but the author contended that it has a specially distinctive character of its own which he calls Arabo-Norman. This palace and another called La Cuba, now a cavalry barrack, were constructed originally upon one and the same plan, and were large rectangular buildings flanked by square towers. The ground floor consisted of a large central hall, really a sort of vestibule to the apartments, covered with a beehive shaped vaulted ceiling, most elaborately decorated with geometrical patterns in stucco and mosaics with somewhat crude colouring of sky blue, coppery green, deep black, and gold. Through the midst of this hall, or vestibule, runs a stream of pure water flowing in a marble channel from a very ornate fountain, having in the wall above it a well-preserved mosaic frieze, the subject of which may well be Norman, representing as it does alternately twin pairs of archers and peacocks, but from the stiffness of the design seems to indicate a Byzantine source. One of the most interesting groups of royal sepulchres in the world is that of the tombs of the kings in the Cathedral at Palermo, which, notwithstanding the barbarous nature of the several restorations the edifice has undergone, happily remain undisturbed. The small but exquisite chapel of the Royal Palace, the Capella Palatina, is the gem, in the author's opinion, of all Palermo. It is a sanctuary more beautiful than the Venetian S. Marco, and more resplendent with mosaic than the lovely little mausoleum of Galla Placidia at Ravenna. It was founded in 1132 by King Roger, and was consecrated in 1140. In the archives is preserved the deed of consecration bearing the date 1140; it is written in letters of gold on a thin plate of silver. The Cathedral of Monreale is described as the most remarkable example of the mixture of styles which existed under the Norman Kings. It is of Latin form, with a Roman colonnade, Byzantine mosaics, Greek sculpture, and Saracenic and Norman details. The mosaics at Monreale are, in point of workmanship, far superior to those of the Royal Chapel, but, being spread over a larger surface, there is not the same splendour and warmth of colouring. The church at Cefalu and the mosaics which are its glory were described; they are supposed to be in point of execution the finest in Sicily, but, in the author's opinion, after Palermo and Monreale, were distinctly disappointing. An interesting discussion followed the paper, in which Mr. Hubbard, who had spent many months in Sicily studying the architectural characteristics, Mr. Patrick, Mr. Compton, and the Chairman took part.

METROPOLITAN ASYLUMS BOARD.

THE usual fortnightly meeting of the Managers of the Metropolitan Asylums District was held at the offices, Victoria Embankment, on Saturday last week.

Joyce Green Hospital.—Among the correspondence received from the Local Government Board were copies of an order authorising the execution of certain painting works at this hospital at a cost not exceeding 7,000*l.*—It was agreed to pay the sum of 600*l.* to Messrs. Leslie & Co., Ltd., the contractors for the erection of this hospital, for certain work "executed by mistake, and without the architects' sanction or order."

London County Council Loan for the Year.—On the recommendation of the Finance Committee, it was agreed to inform the London County Council that, subject to the sanction of the Local Government Board, the following were the estimated loan requirements of the Managers (to be inserted in the London County Council Money Bill) for 1905:—(1) For the year ending March 31, 1906, 275,000*l.*; (2) for the six months ending September 30, 1906, 75,000*l.*; total, 350,000*l.*

Annual Painting Works, etc.—The Works Committee reported that they had received from the Hospitals Committee particulars of the cleaning and painting works required at certain of the Board's institutions. The Engineer's estimate of the cost of the works at the Eastern Hospital was 525*l.*; at the North-Eastern Hospital, 339*l.*; at the North-Western Hospital, 637*l.*; and at the Brook Hospital, 1,132*l.* In the case of the first three institutions the Committee had arranged that the work should be carried out by temporary labour, but in the case of the Brook Hospital it was agreed to invite tenders, and Messrs. Taperell & Haase were appointed to take out quantities.

Belmont Asylum.—The Works Committee reported having sanctioned further variations of Messrs. Enners Brothers' contract, at an estimated net cost of 278*l.* 5s., of which 180*l.* was for the replacement of corroded gas mains and pipes. The amount of the contract was 15,730*l.*, and the value of extras previously reported, 482*l.*

High Wood School.—Early in December the Works Committee reported that they had been unable to obtain from Messrs. C. & W. Henman the architects' order for variations and summary of accounts in connexion with Messrs. McCormick & Sons' contract for the erection of this school, and a copy of the Committee's report was forwarded to the architects, with a request that they would furnish the required information without delay. The Committee now reported that they had received a reply in which the architects expressed regret for the delay, and stated that they had the matter in hand. The Committee had not, however, received the required information.

Wages to Painters.—The Committee reported upon a letter received from the National Amalgamated Society of Operative House and Ship Painters and Decorators in respect of the complaints made to the Board with reference to the dissatisfaction which existed in respect of the rates of pay received by the men employed in painting at the Joyce Green Hospital. The Committee stated that it was not correct, "as insinuated in the last paragraph of the Society's letter," that any coercion or compulsion whatever was used to induce the men to sign a certain document.

Fifty Years Ago.

THE NEW COMMISSION OF METROPOLITAN SEWERS.—A general court was held on 16th inst. Sir John Shelley brought into special notice a subject to which we have strenuously drawn attention, namely, the fact that the Commissioners of Sewers are virtually and actually not Drainage Commissioners. Mr. Thwaites added a new instance of what we have also pointed out—that tenants will rather submit to be without drains, and to suffer from all the abominations of cesspools, than set what little *passive* power the commissioners may have to work for the amendment of these crying evils. Something *must* be done about it—that seems very clear. A discussion was then begun on the ventilation of sewers, which continued for five hours, and was then adjourned. ——At an adjourned meeting, held on Monday, 22nd, the court agreed, *nem. con.* to adopt the plan of low level sewer and branches for the drainage south of the Thames, proposed by the late Mr. Frank Forster, and for parts of which tenders had previously been obtained. The unanimity which prevailed in a court of incongruous opinions, has been ascribed, to a great extent, to our article of last week.—The *Builder*, January 27, 1855.

Illustrations.

SKETCHES IN ENGLAND.

THE large interior sketch is a study of York Minster from the south transept, looking towards the choir.

The first of the small sketches is a study of the Perpendicular doorway, the north aisle of the nave, and the towers of the west front of Beverley Minster.

The second is a study of the west façade of St. Mary's Church, Beverley.

The remaining four sketches are sketches of York Minster from different points of view.

I made the above-mentioned sketches while travelling on the Royal Academy Studentship.

JAS. B. FULTON.

UNIVERSITY COLLEGE PROPOSED SCHOOLS, HAMPSTEAD.

WE give this week the plans, elevation, and section of the design by Mr. Arnold Mitchell which obtained the first premium in the competition for the proposed new University College Schools at Hampstead.

The following extract from the report accompanying the drawings explains the architect's intentions:—

"The school is planned in three blocks, connected by covered ways. The central block is entirely occupied with provision for hall and class-rooms. The left wing includes the dining-hall and service department. The right wing includes the science and art rooms.

This arrangement permits, without waste or inconvenience of plan, the utilisation of the considerable fall in the ground.

Every class-room has sun upon it at some hour of the day.

Every class-room has left light for every scholar.

Every class-room has at least one window carried right up to the ceiling.

Every class-room has at least 18 ft. of superficial area to each scholar.

Every class-room has a space of not less than 7 ft. 6 in. between the front row of desks and the fireplace wall opposite.

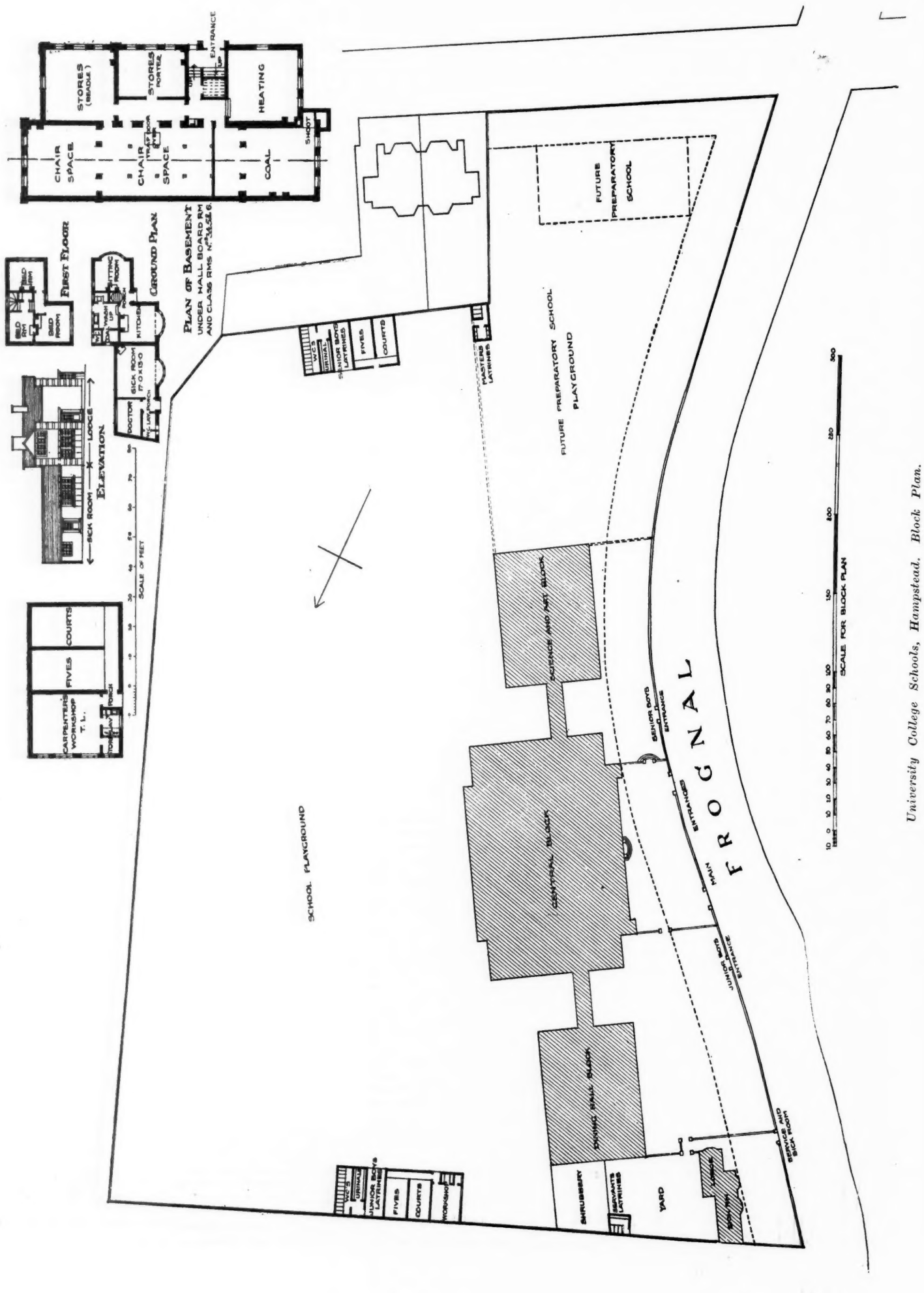
Every class-room opens directly off the hall.

There are no corridors in the main teaching block; adequate supervision is thus secured. The hall is lit by clearstory windows on all four sides. The accommodation is equally divided into senior and junior schools. Both have their own entrance. The dining hall provides for 300 dining at one time.

The materials proposed to be used would be Chesham multi-coloured red bricks with stone dressings; the stone, Monks Park or preferably Doulting stone. The wall throughout internally to be faced with a dado of glazed bricks.

All floors would be of concrete cement with either wood blocks or mosaic paving.

Heating in class-rooms would be by means of open ventilating fire grates, elsewhere with low-pressure steam. Foul air would be extracted from class-rooms by means of extract flues in all stacks, elsewhere by electric exhaust fans."



University College Schools, Hampstead. Block Plan.

COMPETITIONS.

ELEMENTARY SCHOOL, NORTHWICH.—In a limited competition for this school the assessor (Mr. H. Beswick, County Architect for Cheshire) has placed first the plans of Mr. A. E. Powles, of Northwich, and they have since been accepted by the committee. The estimated cost is 10,500*l.*

HOME FOR THE AGED, LAMBETH.—The first premiated design in the recent competition for the conversion of a portion of school premises into Home for Aged Poor, Lambeth, was that submitted by Mr. E. C. Beaumont, 78, Fleet-street, E.C., and the second was by Mr. W. M. Weir, 17, Victoria-street, Westminster, S.W.

LIBRARY, WHITEHAVEN.—The new Carnegie Library at Whitehaven will consist of a lending library for 12,000 volumes, a reading-room for 66 readers, a juvenile room, reference library, magazine room, small lecture hall, librarians' and committee rooms, and librarian's house. The cost of the building is estimated at 4,000*l.*, exclusive of furnishings. The architects are Messrs. Greig, Fairbairn, & Macniven, 31, York-place, Edinburgh.

Books.

Lockwood's Builders', Architects', Contractors' and Engineers' Price Book for 1905. Edited by FRANCIS T. W. MILLER, A.R.I.B.A., London: Crosby Lockwood & Son, 7, Stationers'-hall-court, Ludgate-hill. 1905.

WITH commendable enterprise, the publishers of this now standard work have produced the new volume somewhat earlier in the year than usual. It is therefore the first of this class of year book to appear. The state of trade during the past twelve months being practically similar to that of 1903, little in the shape of revision was necessary, but where this was requisite, it has generally been done with the same thoroughness as hitherto. This careful annual revision, based upon the practical rewriting of the work some years ago, has placed it in a position amongst builders' price books hardly dreamt of in connexion with the work as originally produced. We are glad to see that the price of bricks, as a basis of the price of brickwork, has been reduced from that obtaining a few years ago, when it was at phenomenal height, although we can hardly reconcile the method of pricing given in the heading with the reduced prices of labour and materials. We should like some indication given as to the amount of discount from some of the *list* prices; *list* prices giving little indication of the true value of the various articles. This question of list prices and prime costs is a very vexed one, and leads to many disputes. The Conditions of Contract of the R.I.B.A. are fairly explicit, leaving open the question of *cash* discounts only. In dealing with invoices, it is somewhat surprising frequently to see what a tradesman professes to allow for prompt payment. The sooner the question is definitely settled the better, although most surveyors have a limit in their own practice as to what they will allow under this head. To revert to the book, it is perhaps sufficient to say that the new volume fully maintains the reputation the work has gained.

Sketches on the Old Road Through France to Florence. By A. H. HALLAM MURRAY; accompanied by HENRY W. NEVINSON and MONTGOMERY CARMICHAEL. London: John Murray. 1904.

THIS is a book *à trois;* the illustrations by Mr. Murray, part of the literary portion by Mr. Nevinson, the rest by Mr. Carmichael. From our point of view, however, the value of the book lies mainly in the illustrations. Mr. Murray's original watercolours for these were exhibited a few weeks ago at the Fine Art Society's Gallery, when we fully expressed our opinion of their artistic beauty and finish. We have equal praise for the manner in which they are reproduced. Such colour-printed illustrations are seldom seen, in English books at all events, and it is evident that no pains or cost have been spared over them. A note on the subject informs us that they have been printed by Messrs. André and Sleigh in their latest development of the photographic three-colour process; and, to avoid the disagreeable effect of the highly burnished paper often used for this purpose, they have been printed on a specially prepared plate paper. A description of the process is given, for which we refer the reader to the book. It has certainly been most successful as far as colour-printing can be successful, and the result is one of the most beautifully illustrated books we have ever seen. As we observed when reviewing Mr. Murray's exhibition, the majority of the pictures deal with architectural subjects, and architecture could hardly be better treated pictorially than it is here. Many architects may be glad to have the book solely for the illustrations.

The literary merit of the book is also high. The style of writing of both authors has an ease and charm, and though it is not a book of serious architectural or archæological study, there are a great many interesting descriptions of reflections on the places visited. Mr. Carmichael gives a capital description of a visit to the Carrara marble quarries, where he suggests that sculptors should occasionally come, if not to choose their marble, as it is said that Michelangelo did, at all events "to come into contact with marble in the rough; it would give new inspiration at home to their marble in relief." In regard to the leaning tower of Pisa, he thinks that the sensational fact of its leaning has rather blinded visitors to its remarkable architectural beauty. There are notes on a good many out-of-the-way places, which may be useful as suggestions to travellers in Italy. A good deal of the book is purely literary in its interest, and therefore not so much within our professed province, or we should deal with it more at length. But it is all pleasant reading, and never dull for a moment. Being a book rather sumptuously got up, besides the attraction of the beautiful illustrations, it is particularly suited for a gift-book, in which sense we may recommend it to the attention of anyone who is wanting to choose a present for a relative or friend.

Hispano-Moresque Ware of the XVth Century. By A. VAN DE PUT. *The Art Workers' Quarterly.* Chapman & Hall. London: 1904.

"A CONTRIBUTION," so the author calls it, to the History and Chronology of this Art in Spain, "based upon armorial specimens." Very fortunate is it that there are so many armorial specimens. Very fortunate (for the moment) that chivalry died so hard in Spain, for it affords us valuable clues as to more than one branch of the arts of that land. Yet in this very survival of decadent chivalry, and in its consequent sterilisation of social and political progress, lies the reason for the foreigners' ignorance of Spain, for the few exports of that land, for the rarity—this side of the Pyrenees—of examples of its ancient arts and crafts. Although Spain was once the dominating Power of Europe, Spanish mediæval MSS. are rarest of rare books out of Spain, Spanish printing has been hardly noticed, Spanish pottery only beginning to assume any importance in the field of ceramic studies. The book before us is avowedly a piece of pioneer research, which, since the examples are almost all taken from English collections, it is the more surprising is but now undertaken.

For some reason—probably the almost superhuman efforts of the Church to check the spread of religious disaffection in the XVth and XVIth centuries—we know rather more about Spain in the XIIIth and XIVth centuries than we do of it during the succeeding hundred years. In the work under review M. Van de Put pretends to present something like a connected, if tentative, survey of the development of XVth century Hispano-Moresque ware—this, for all practical purposes, means "lustre" at its best. Now "lustre" flourished at Bagdad in the IXth century after Christ, and is very likely of much earlier origin. The art spread rapidly through Moslem nations, and if Edrisi, writing before 1154, means lustre by "Golden Pottery"—as he almost certainly does—(M. Van de Put quotes a French translation) it was actually being exported from Spain in the XIIth century as the product of Moorish potters. In the XIIIth century the building of the great Alhambra yielded considerable opportunities for ceramic designers. The tiles there observed, and the style and workmanship of the one surviving Alhambra vase, point to Malaga as the provenance. A certain dish at St. Petersburg, claimed to range with the above, bears the Malaga mark. By 1530 this particular ware (Malagan) had practically lost its reputation.

And now we enter on controversy. Not a few writers have taken the view that Majorcan (Majolica) is the correct name for the pottery, which, shipped to Italy—in particular to Pisa and Siena—gave the inspiration to the great masters of Italian *faience* in the XVth and XVIth centuries.

On p. 39, *et seq.*, M. Van de Put sets out the evidence for the supposed *fabrique* at Inca, in the island of Majorca, and certainly persuades us that Davillier, upon whom the authority for the Majorcan contention most certainly rests, was mistaken, and perhaps a trifle careless, archæologically. It appears tolerably certain that the early European lustre was of Spanish origin, and that its shipment in the Balearic vessels had probably led to the notion that the art hailed from one of the islands of that group.

We must not spoil the perusal of M. Van de Put's text by laying bare the treatment of his subject, to which what we have already said may be taken as introductory. His work is deeply interesting and admirably written, and readers who are also students will find references given throughout the work to authorities consulted, and will be gratified to discover at last a reliable index. The general method of describing the specimens of pottery cited is that of the *Catalogue Raisoncé*, and it is at once clear and concise. A sketch map giving the chief centres of manufacture is inserted opposite p. 20.

The illustration plates, three of which are in colours, are, upon the whole, good, but, of course, printed upon the usual bad shiny paper which certain publishers continue to declare is the best for the purpose, in spite of the Society of Arts report and the continual practice of the Clarendon Press. The text itself is very well printed, and the work is sensibly and prettily bound.

Picturesque Middlesex. By R. H. ERNEST HILL and DUNCAN MOUL. London: F. and E. Robinson & Co. 1904.

MR. HILL describes, and Mr. Duncan Moul illustrates in this book the numerous villages that lie outside suburban London on its north and west sides, a district bounded on three sides by the rivers Thames, Colne, and Lea, each giving added charm to those places that happen to be placed on or near them. The scheme adopted has been to begin at the southern boundary at Hampton Court, gradually working up the Colne valley to the county border near Rickmansworth, then passing east through Edgware and Hendon to Enfield and the Lea. With the ever-increasing facilities of transit by train and tram the portion of the county lying west and north-west of the Metropolis is better known than it was a few years ago. Some disadvantages must necessarily result from the opening-up of what have hitherto been very secluded spots, and the book under notice will be an interesting possession for those who already know the charm of this county, or for those Londoners who wish a guide to pleasant places almost at their doors. Even the brick-field district that forms such a feature of the Great Western Railway between Southall and West Drayton, if apparently uninteresting, will well repay the searcher after the picturesque; the Grand Junction Canal, the bridges, the slowly-moving and highly-coloured barges, with often a background of trees, provide pictures which the artist need not despise. Nearly every village has its picturesque cottages and an interesting church. Some of these latter, chiefly those nearer London, have suffered from restoration or rebuilding, but nearer the county boundary, especially on the west, much remains of interest architecturally—the fine Norman work at Harlington and Harmondsworth, the monuments ranging from the XIVth century brass to the late Renaissance tomb at Harrow and Harefield, being but a few points among many. Some interesting late glass will be found in the little church at Great Greenford and interesting fonts at West Drayton, Hayes, and Hendon. Of domestic work the most important perhaps are the grand barn at Harmondsworth, 190 ft. long, and the remains of a camera of the Knights Hospitallers near Harefield. At this latter village is a good group of almshouses; smaller ones are to be found at Whitchurch. Most of the foregoing are either illustrated or described in this book, and all lovers of the Home County will find it a handy book of reference. A small map would have been a useful addition to the work—we would suggest it in future editions.

Hampstead Wells: A Short History of Their Rise and Decline. By GEORGE W. POTTER. London: George Bell & Sons. 1904.

THIS little book recounts the story of the ancient wells and springs of Hampstead. The author,

University College Schools, Hampstead. Block Plan.

who is a trustee of the Wells and Campden Charity (1698), gives a short description of the geological features of the neighbourhood, of the former supply of drinking-water from the north and north-west of London, and of the establishment of the Hampstead Water Works Company, who, in 1692, leased from the Corporation of the City the ponds on East Heath whence, as well as from the Highgate ponds, they conducted the unfiltered water to a reservoir now the sight of Tolmer's-square, Hampstead-road. The New River Company constructed the reservoir near the Whitestone pond when they took over the works fifty years ago. Of the many old wells, springs, and conduits cited by Mr. Potter there was one which we ourselves distinctly remember at what is now the summit of Fitzjohn's-avenue where, being then in the fields, many a time we have seen the water-carriers descend the steps and dip their buckets into the pool beneath the old arch. Known as the Shepherd's Well, it is illustrated in Hone's "Table Book," vol. iii., 1841; the water did not freeze, and was not chalybeate. The chalybeate springs were in another part of the parish, at Well Walk, rising from a marshy tract whereof six acres constitute the corpus of a trust set up for the benefit of the local poor in December, 1698, by the Earl of Gainsborough (then a minor) and his mother the Countess. The grant specifies the "medicinal waters called the Wells," around which one John Duffield shortly afterwards built the Spa which, with its pump-room, assembly-room, and gardens, with bowling-green and raffling shops, soon became a highly popular resort. With the aid of plans and illustrations Mr. Potter traces the positions and subsequent uses of the Spa buildings. The Long or Great Room in Well Walk, shown in the print after Chatelaine, having been converted into a chapel in 1725, and since used as a Volunteers' drill-hall, survived until 1882 when a house called "Well Side" was built in its place, the gardens, however, and the trees are in a great measure preserved. Alterations in Well-walk and Well-road and the making of sewers have cut off the flow of water of the old chalybeate spring on the east side of the walk; a granite drinking-fountain erected on the west side yields a very sparse supply, and though the spring has been lately found in the near vicinity, the highly ferruginous water contains organic matter.

Practical Surveying. A Text-book for Students Preparing for Examinations or for Survey Work in the Colonies. By GEORGE WILLIAM USILL, Assoc.M.Inst.C.E. Eighth Edition, thoroughly revised and enlarged by ALEXANDER BEAZELEY, M.Inst.C.E. London: Crosby Lockwood & Son. 1904.

MOST students of surveying are familiar with the admirable treatise written by the late Mr. Usill, whose experience in the preparation of candidates for examinations enabled him to form a just conception of the most appropriate treatment to be followed in a text-book. In the present revised edition Mr. Beazeley has taken the opportunity of adding some new matter, which has the effect of bringing the work thoroughly up to date, and of correcting sundry topographical and kindred errors to be found in previous editions. While preserving the original text as far as possible, the editor has found it necessary to modify and amplify some portions and to re-write others. Speaking generally, it may be said that the task has been performed judiciously, and that no evidence is given of a desire to make alterations without adequate reason. As the manual in its previous form has already been reviewed in our columns, it is unnecessary to dwell at length upon the various departments of surveying work that are discussed in its pages. After preliminary chapters relating to the instruments and mathematical knowledge forming the equipment of the surveyor, the author discusses chain surveying, theodolite surveying, traversing, town surveying, levelling, contouring, and setting out curves, concluding with chapters on office work and land quantities. All these sections of the general subject are dealt with in a manner that leaves little to be desired and which we believe will be fully appreciated by students. It should be remarked, however, that the claim made upon the title page, relative to students preparing for survey work in the colonies, is scarcely justified by the body of the work, which is essentially a text-book of surveying as practised in the United Kingdom.

No attempt is made to deal with engineering field work as practised in India and similar countries, or with the special knowledge that should be possessed by aspirants for work in the colonies. Mr. Beazeley has certainly made an attempt to justify reference to the colonies by the insertion of a chapter containing the latest regulations under which licences for practice are issued in the chief British possessions. This is a most useful feature, and one that is not to be found in other text-books on surveying; but the fact remains that candidates must look elsewhere for teaching in the higher and special branches of surveying generally required in new countries. These remarks are merely in criticism of a claim which is not fully substantiated, and must not be taken as reflecting in any way upon the general usefulness of a book of which we entertain the most favourable opinion.

Smoke Prevention and Fuel Economy By WM. H. BOOTH and JOHN B. C. KERSHAW. London: Archibald Constable and Co. 1904.

THIS book is principally devoted to a discussion of the methods by which boilers can be economically heated without the concomitant evil of the emission of smoke from the boiler furnaces. Only very brief reference is made to the domestic smoke problem, but we agree with the authors that its solution lies in the direction of gas firing. The book is divided into four chapters and three appendices. Chapter I. discusses in a very elementary style the "Chemistry of the Combustion Process"; Chapter II., the present methods of burning fuels; Chapter III., the improved methods of burning fuels; and Chapter IV., the examination of waste gases and control of the combustion process. This last chapter is, we think, the most useful portion of the book.

In the opinion of the authors the present smoke of London is due to the use of water-tube boilers more than to anything else.

"Before the advent of the latter-day water-tube boiler the question of smoke was gradually being brought into line. Water-tube boilers had been tried and found wanting in the matter of smoke. In the United States, however, where the making of boilers is very far behind the practice of this country (and it was still further behind a quarter of a century ago), the water-tube boiler was persevered with, and the well-known type of to-day was evolved. . . . But the water-tube boiler in America was the product of the hard coal region. It was made to burn Pennsylvanian anthracite, which is absolutely smokeless. . . . This boiler, which could not make smoke when fired with Pennsylvanian anthracite, was sent over to Great Britain to use bituminous coal, and, being set exactly as in America the results have been hopelessly bad."

The smoke remedy for water-tube boilers recommended by the authors consists in the use of external furnaces or generators, and firebrick linings for the furnace and boiler settings. The boiler is, in fact, located in an oven heated by the combustion of producer gas. It is admitted that the initial cost of an installation of this description would be greater than the older forms, but the authors contend that the argument that steam cannot be economically raised unless the boiler is exposed to the direct radiation of the furnace is fallacious. There is little doubt that smoke emission would be rendered unnecessary if the boilers were heated in the manner recommended, but we fear that the cost would be prohibitive except in the case of very large installations.

We entirely agree that the time has come when more stringent supervision as to smoke emission should be demanded. A large number of manufacturers have already replaced steam engines with gas engines, with the result that where such conversion has taken place smoke emission has ceased and pecuniary advantage accrued. Many of the manufacturers who continue to pollute the atmosphere with smoke cannot justly claim that their machinery cannot be economically operated without the use of steam. We are, of course, aware that laws relating to the smoke nuisance already exist, but we are also aware that even in the heart of London scores of factory chimneys continue to belch forth smoke of appalling blackness.

The authors rightly say that "smoke ought to be attacked, not only because it brings dirt and depression in its train, but because its emission is accompanied by that of gases which are directly detrimental to the health of all living things." We welcome the attempt of the authors to demonstrate how even water-tube boilers may be economically fired without emission of smoke from the furnaces.

New Streets: Laying Out and Making Up. By A. TAYLOR ALLEN, C.E. London: The Sanitary Publishing Co., Ltd. 1904.

THIS is a useful little compilation giving clear and brief information on the subject, both in regard to the law and to the technical part of the matter. At the end there are sections and drawings, and a full index. But why is the date of publication omitted from the title page? This information a year or two hence may be material.

Aids to the Study of Sanitary Law. By HARRY CRITCHLEY, M.A., M.D., D.P.A. London: Bailliere, Tindal, & Cox. 1904.

THIS is simply a handbook giving in untechnical and clear language the substance of the various existing statutes regulating the public health. It is a capital book, with a sufficient index, and should be useful to medical officers, who have to know the outlines of public health law.

The "Mechanical World" Pocket Diary and Year Book for 1905. Manchester: *Mechanical World* Offices.

THE chief feature of novelty in the present edition of this little book is the addition of tables of trigonometrical ratios, of the squares, cubes, and fourth powers of fractions, and of powers, roots, and reciprocals of factors in common request. A table of sheet and hoop iron gauges is now included, and various minor revisions have been made.

BOOKS RECEIVED.

CASSELL'S CYCLOPÆDIA OF MECHANICS. Edited by Paul N. Hasluck. Fourth series. (Cassell & Co.)

LIVES OF THE ENGINEERS. Smeaton and Rennie. By Samuel Smiles. Popular edition. (John Murray. 3s. 6d.)

PROCEEDINGS OF THE INCORPORATED ASSOCIATION OF MUNICIPAL AND COUNTY ENGINEERS. 1903-1904. Edited by Thomas Cole, A.M.Inst.C.E. (E. & F. N. Spon.)

OLD HOUSES IN EDINBURGH. Drawn by Bruce J. Horne. Part I. (S. Bagster & Sons. 1s.)

YORK: THE STORY OF ITS WALLS AND CASTLES. By T. P. Cooper. (Elliot Stock. 10s. 6d.)

Correspondence.

SPRING-GARDENS, CHARING CROSS, AND WHITEHALL.

SIR,—As a student of London topography, I quite appreciate the time and labour involved by, and the excellence of, your New Year's article. One is obliged for the writer's courteous offer of Mr. Cates's survey, especially when it is remembered that that gentleman was the professional successor of Chawner & Pennethorne. My point, however, is established in another way. The London Post Office Directory for 1886 shows that Viscount Gage inhabited No. 4, Whitehall-yard; and section 19 of the Horse Guards Avenue Act, 1888, provided that, before No. 5 and 6, Whitehall-yard, were demolished, No. 4 should be fitted up for a Government office, such as it is to-day. The Bankruptcy Department occupied Nos. 5 and 6 from 1886, and passed, in 1889, into No. 4, when the alterations were completed.

As to the identification of the site of the Dowager Duchess of Portland's house by means of the present houses in Whitehall-gardens, my statement that Sir Robert Peel's house covered the spot is based on a return made by the Commissioners of Woods, Forests, and Land Revenues. Dr. Sheppard, to whose book I am referred, states that the Duchess sub-divided her house, and the leases had become intermixed. He quotes the original lease to William, Earl of Portland, but omits the length of land conveyed. This lease is dated April 6, 1696, and conveys a frontage of 124 ft. 5 in. for forty-two years at 6s. 8d. a year, according to the enrolment of leases in the Land Revenue Records. There are, as Dr. Sheppard states, subsequent leases to the succeeding Dukes and to the Duchess; but it is evident, from Bromley's view, that Portland House did not stand on the extreme north of the land leased, whilst No. 6, Whitehall-gardens, has only a frontage of some 40 ft., and is on the extreme north of the ground. I hazarded that No. 6 was originally Lord Sheffield's house, as he was living in the Privy Gardens, as they were then called, in 1795. In Mrs. Adeane's "Early Married Life of Maria Josepha Lady Stanley (of Alderley)," under date October 2, 1808, Lady Maria writes:—"We are told our house in Privy Gardens is nearly completed, and that it looks well. When my Lord Sheffield (Gibbon's friend did not die until 1821) sees how different whitewash, paint, and paper make it appear, I think he will be

very sorry he parted with it, for the situation must suit him better than Portland-place. The yearly rent is 210*l.*, and the taxes moderate, from the place being extra parochial on account of its being part of the old palace ground." It is difficult to say whether this house stood north or south of Sir Robert Peel's site; prior to 1847 these houses were not numbered in the Post Office Directory, but the residents were alphabetically arranged. The task of identification is, therefore, not an easy one, and the researches of your article writer are worthy of much praise.

ROBERT J. LISTER.

SCHOOL, PORTH.—The Higher Elementary School, which has been erected at Porth, has just been opened. The school has cost 10,375*l.* The contractor was Mr. Willis, Pentre, and the architect Mr. J. Rees, Pentre. There is accommodation for 240 children in the seven classrooms.

The Student's Column.

TYPICAL STRUCTURES IN CONCRETE-STEEL.—IV.

A SIXTEEN-STORY OFFICE BUILDING (*continued*).

CONTINUING the description—commenced in our last issue—of the Ingalls Building, we will next consider the construction of the columns.

Fig. 20 includes a part vertical section of a typical column with girder connexions, and a cross-section of the same column.

Each column is provided with four, six, or eight plain round steel bars, ranging from 2 in. to 3½ in. diameter, having faced ends held together by sleeves of wrought-iron pipe filled with cement grout. In the basement these bars take a bearing, as already stated, on the projecting faced bosses of the cast-iron bases. In the first three stories the column bars were cut to length, so that they extended a few inches above the floors, and the next lengths were added as the work proceeded. In the stories above, the bars were of sufficient length to extend through two floors, the jointing in each case being performed with pipe sleeves and cement grout.

The essential purpose of the round bars is to resist direct compression, but in addition each column has from four to ten twisted bars of square cross-section to resist tension due to flexure arising from wind pressure. The column in Fig. 20 has ten twisted bars, placed 1 in. from the surface of the concrete, these bars being joined together at the middle of each story with splices formed of ¼-in. twisted bars wrapped with wire.

In addition to vertical reinforcement, the round compressive bars are connected by three sets of transverse ties in the height of each

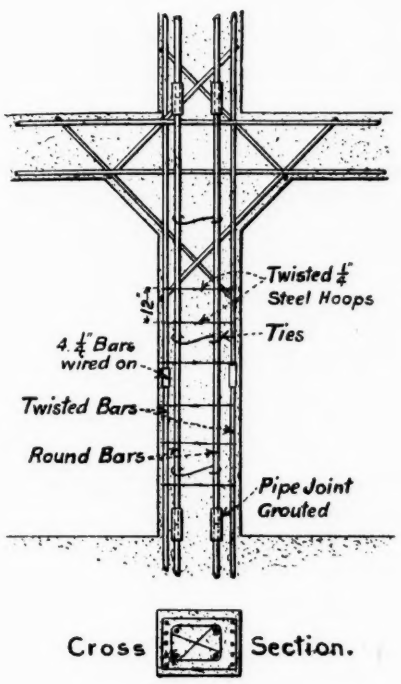
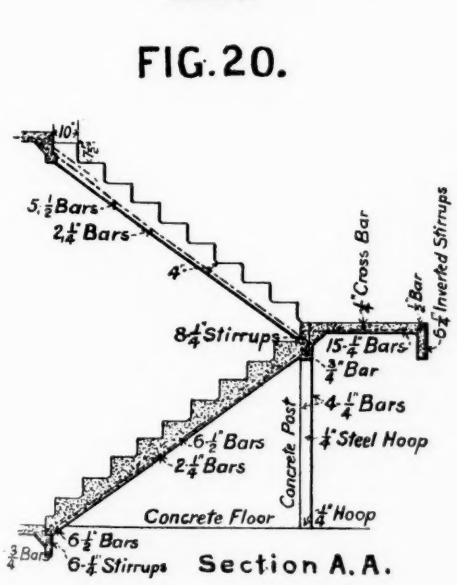


FIG. 20.



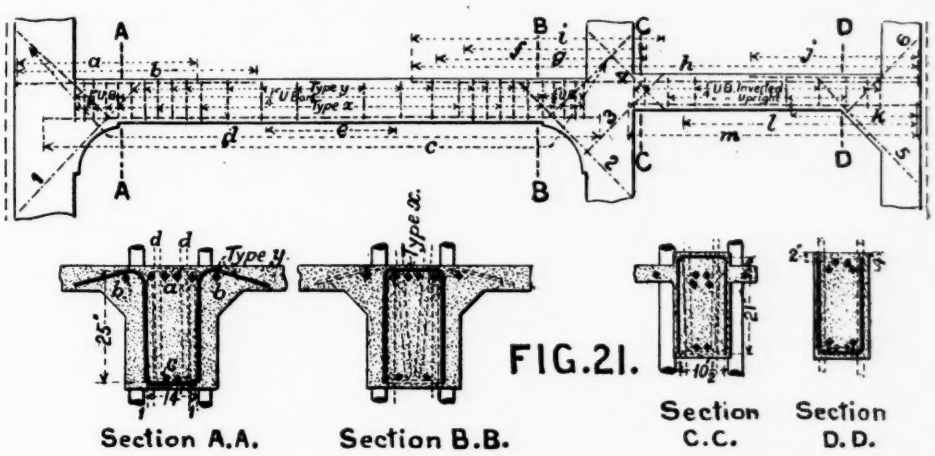


FIG. 21.

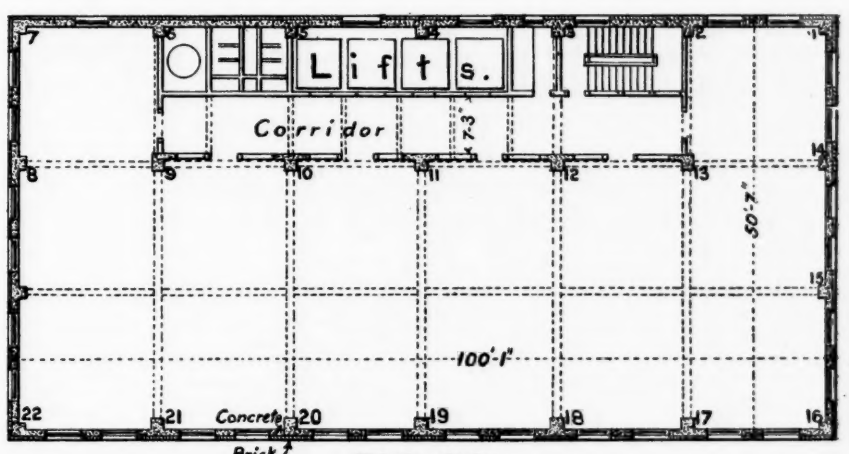


FIG. 22.

FIG. 23.

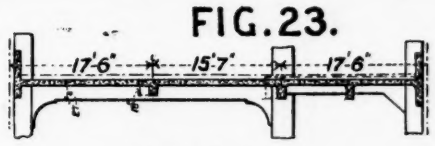


FIG. 24.

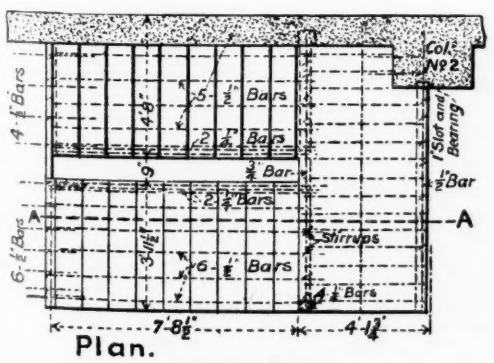


FIG. 26.

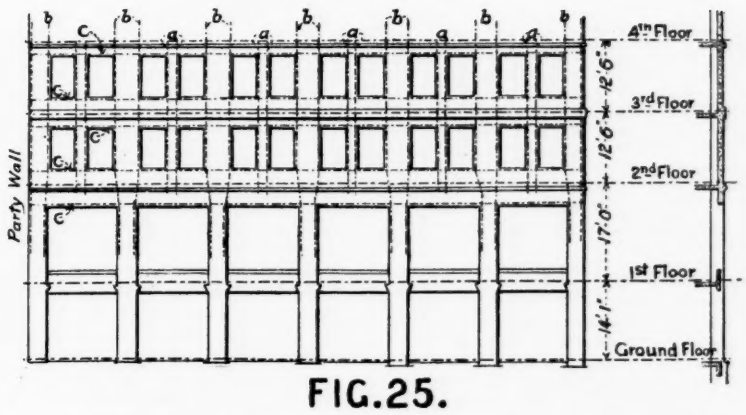


FIG. 25.

Illustrations to Student's Column.

story, to prevent any tendency to outward buckling, and to add to the shearing strength of the columns. The twisted wind bars are also tied transversely by hoops of ¼-in. twisted steel, as shown in Fig. 20. These hoops are spaced at intervals of about 12 in., centre to centre, and secured by wire to the verticals, the ends of each hoop being bound with wire.

The dimensions of the cross-sections of the various columns were settled in accordance with architectural requirements, and with the loads to be carried. The resistance of the cross-section so determined was calculated in the first place for concrete alone, and the deficiency of strength was then made good by the addition of round steel bars. Thus the practice followed was in agreement with the principle stated in a previous article,* that "the only advantage of longitudinal reinforcement in columns consists in adding the resistance of the steel to the resistance of the concrete."

Allowance was also made for strain due to shrinking of the concrete (which, as we showed in the same article, may cause severe initial stress in the steel reinforcement) and the cross-sectional area of the materials was adjusted so that the stresses might be proportional to the co-efficients of elasticity of the concrete and the steel.

On reference to Fig. 20 it will be seen that very strong girder connexions are formed by the diagonal bracing bars and the concrete brackets on the column at the end of the girders.

Corresponding with the spacing of the columns, the main girder spans are from 16 ft. to 33 ft., the clear spans, of course, being slightly less. In the ground floor, the main girders measure 20 in. wide by 36 in. deep; in the first floor, 20 in. wide by 34 in. deep; and in the floors above 20 in. wide by 27 in. deep. The depths here mentioned include the thickness of the floor slabs, which are 7 in. thick in the ground floor, and 5 in. thick in all floors above.

Fig. 21 gives details of typical girder construction, the most noticeable feature being the apparent preponderance of reinforcement in the upper part of each beam. On closer examination, however, it will be seen that the upper bars only extend for a certain distance from each support. The reason for this is that owing to the ample strength and rigidity of the column connexions, the girders were justifiably considered as continuous beams. Under these circumstances the upper part of the cross-section is in tension up to the point of contrary flexure, a fact accounting for the arrangement of the reinforcement illustrated in Fig. 21.

In addition to the horizontal reinforcement shown, all the girders are amply provided with vertical reinforcement, consisting of U-shaped stirrups of twisted steel bars for resisting shear, every alternate stirrup being inverted. These stirrups are placed at different distances apart in accordance with the progressive diminution of shearing stress towards the middle of the girder. The ends of the horizontal bars are continuous through the columns, and pass between the vertical compression bars.

As pointed out above, the connexions between the beams and the columns are strengthened by diagonal bracing, extending from the top of the girder downward, and from the bottom upward, the lower diagonals being protected by concrete brackets, which not only help to fix the ends of the girders, but also serve as additional wind bracing (see Fig. 20).

The following table gives particulars of the horizontal and diagonal reinforcement in the girders represented in Fig. 21, the letters in this table corresponding with those in the sections.

PARTICULARS OF REINFORCEMENT IN FIG. 21.

HORIZONTAL REINFORCEMENT IN GIRDERS.

a	4	1¼	in. bars	10	ft. long
b	2	1	,,	13	,,
c	2	1	,,	34	,,
d	2	1	,,	34	,,
e	2	½	,,	7	,,
f	2	1¼	,,	10	,,
g	2	1¼	,,	11½	,,
h	2	1¼	,,	34	,,
i	2	1¼	,,	14	,,
j	2	1¼	,,	11½	,,
k	2	½	,,	7	,,
l	2	1	,,	13	,,
m	2	1	,,	16	,,

DIAGONAL REINFORCEMENT IN COLUMN CONNEXIONS.

1	2	1	in. bars	9½	ft. long
2	2	1	,,	8¼	,,
3	2	¾	,,	6	,,
4	2	¾	,,	5½	,,
5	2	¾	,,	8	,,
6	2	¾	,,	5	,,

* The *Builder*, Vol. lxxxv., p. 612.

STIRRUPS IN GIRDERS AT LEFT HAND.

x	4	¾ in. U-bars	5 ft. 4 in.	long
x	10	¾ ,,	5 ft. 4 in.	,,
y	14	¾ ,,	7 ft. 8 in.	,,

STIRRUPS IN GIRDER AT RIGHT HAND.

10 ¾ in. U-bars 4 ft. 4½ in. long.

As a general rule, the under parts of girders are not covered, but in the corridors of the building a ceiling is formed 6 in. below the under side, the space between the ceilings and the floor slabs being used as air ducts in connexion with the system of ventilation.

The floor slabs are reinforced by two series of twisted bars laid longitudinally and transversely, the bars being simply held in position by the surrounding concrete. Each of the larger floor panels, measuring 32 ft. by 16 ft., is sub-divided into two panels, each 16 ft. square, by an intermediate girder (see Fig. 22). In calculating the proportions of the reinforcement, the panels were treated as slabs, supported along each of the four sides.

Fig. 22 is a typical plan, which shows the general arrangement of the upper floors; and Fig. 23 is a floor section between the columns from end to end of the building. The widths of the main girders represented in this section are as follows:—

On floors 2 to 4	20 in.
,, 5 to 9	18 in.
,, 10 and 11	17 in.
,, 12 to attic	16. in.

Fig. 24 is a section between the columns across the building. In this drawing the intermediate girder will be seen as well as the dimensions of the girders illustrated in Fig. 21.

All the floor slabs are monolithic with the walls, columns, and girders, the calculated live loads being 200 lb. per sq. ft. for the ground floor, 80 lb. per sq. ft. for the first floor, and 60 lb. per sq. ft. for the remainder of the floors.

As indicated in Fig. 12 *ante*, the roof is flat, and its construction generally resembles that of the floors. The upper surface of the concrete slab is covered with thick sheets of roofing felt jointed with tar, and over this is a 1½-in. layer of concrete, faced with neat cement finished smooth and divided into squares by V-shaped grooves filled with asphalt, the same as in the case of the street foot pavement.

Irrespective of the marble and brick facing, the outer walls of the building are only 8 in. thick, and the party walls are not more than 4 in. thick. The concrete of the walls is reinforced throughout with vertical and horizontal bars of twisted steel. Fig. 25 includes an elevation on the Vine-street frontage, from ground level to the fourth floor, and a section of the outer wall. The vertical bars (*a*) extending through two floors are ½ in. square and 27 ft. long, the ends being jointed close to the floor line. These bars are about 2 in. away from the window openings. The vertical bars (*b*) form the column wind reinforcement, which has already been described, the joints being made half-way up each story. The horizontal reinforcement (*c*) consists of pairs of ½-in. twisted steel bars set side by side near each face of the wall, and about 1½ in. above the top and bottom edges of the window openings. The bars are 27 ft. long, and their ends are overlapped 21 in. at all joints, the overlapped ends being bound with wire when the joints come between the columns.

Fig. 26 is a plan and section of a stairway, the position of which is indicated in Fig. 22. As all essential details are clearly shown in the drawings no comment is necessary.

Adhesion between the concrete and the steel was taken at 500 lb. per sq. in., and experiment demonstrated that ½-in. twisted bars embedded in concrete blocks, measuring 8 in. by 8 in. by 12 in. long, could not be pulled out until the force attained 19,000 lb. This high result was evidently due to the mechanical bond afforded by the twisted surface of the steel bar, added to the natural adhesion between the two materials (see Article VI. of our previous series*). It is claimed by the patentees of the twisted bars that twisting has the effect of increasing their tensile resistance by about 33 per cent. as compared with untwisted bars, and of raising their elastic limit almost to the ultimate resistance of plain bars.

In the building now under consideration, the bars were twisted on the site by a specially designed machine having three different heads revolving at different speeds to suit the sizes of the bars to be treated. The time required for twisting averaged about one minute, the bars being twisted so that the angle formed by the edge was tangential to an angle of about 20 deg. It is stated that in the case of a 1-in. square bar this effect can be attained by one complete turn in each foot of length.

The concrete used throughout the structure consisted of 1 part of Portland cement, 2 parts of clean sharp sand, and 4 parts of pebbles, or crushed limestone. A wet mixture was generally used, the proportion of water being varied to suit the different members for which it was required. The concrete was thoroughly stirred and worked in the moulds by means of steel bars, or timber poles, so as to insure the escape of air, and the filling of all spaces between the several bars of the reinforcement. Especial care was taken in the case of narrow girders to fill the moulds slowly, and to stir the concrete at the same time to prevent the formation of voids. In addition to stirring of the concrete, the moulds were all struck on the outside with mallets to insure the settlement of the concrete, and to guard against the appearance of voids on the exterior faces of the work.

In the next article a brief account will be given of the concrete moulds and plant employed by the building contractors.

* The *Builder*, Vol. lxxxv., p. 165.

OBITUARY.

MR. BLASHILL.—We greatly regret to announce the death, on Friday, January 20, at his house, 29, Tavistock-square, London, after a short illness, of Mr. Thomas Blashill, in his 75th year. Mr. Blashill, a son of Mr. Henry Blashill, of Sutton-on-Hull, received his education at Hull, Scarborough, and University College, London. In 1857 he was elected a member of the Architectural Association, and was President in 1862-3. In 1866 he was elected an Associate, and in 1877, a Fellow, of the Royal Institute of British Architects, of which he served as member of Council, and for the sessions of 1900-1, 1902-3, and 1904-5, was elected a member of the Science Standing Committee. He was a Fellow of the Surveyors' Institution; Vice-President of the British Archæological Association in 1901, and honorary treasurer of that society during some while until his resignation of that office in November, 1899; and a member of the Council of the London Topographical Society, whose annual meeting he attended but four or five weeks ago. In February, 1887, Mr. Blashill, defeating A. M. Peebles by one vote, was elected to succeed G. J. Vulliamy, who died in 1886, as Superintending Architect to the late Metropolitan Board of Works. He held that appointment under their successors, the London County Council, until his retirement, on a pension, on March 28, 1899, the term of his tenure of office having been extended in the interests of the public service on three occasions within the interval, notwithstanding his attainment of the age of 65 years in October, 1895. In the period 1887-1899 Mr. Blashill prepared the plans and designs of a large number of buildings for the Board of Works and the London County Council, amongst them being the following:—The enlargement, with a gallery for the public and a rearrangement of the floor space, of the boardroom at Spring-gardens for the London County Council, 1839, and an extension of the reporters' gallery, 1894; the Weights and Measures Testing Offices and the Gas-Meter Testing Station in Rosebery-avenue, Clerkenwell, 1891-3; the Weights and Measures Testing Offices, on the site of the Horsemonger-lane Gaol, Newington; the lodge at North Woolwich Gardens, 1891; the fire brigade stations at North Woolwich, Dulwich, Cherry Garden-street, Rotherhithe, Simpson-street, Battersea, Carmelite-street, Whitefriars, Lewisham (old Lewisham House site), Clerkenwell, Red Cross-street, Cripplegate Without, Hampstead (enlargement), Fulham-road, near Parson's Green, and South Lambeth, a conversion of Arlington House; the Coroner's Courts at Bethnal Green, 1896, and Paddington, 1898; and the Weights and Measures Testing Offices in Harrow-road and in Calvert-street, Shoreditch. He was the architect of twenty-one blocks of working-class dwellings, built on the Boundary-street, Shoreditch, site, opened by the King (then Prince of Wales) on March 3, 1900; of similar blocks built on the site of Millbank Prison, some other of his designs being carried out there by his successor, Mr. Riley; cottages on Plot II. of the Brook-street, Limehouse, area (1899); and, in conjunction with Sir Alexander Binnie, late Chief Engineer, London County Council, the houses at the entrances into the Blackwall tunnel, opened on May 22, 1897. On January 29, 1887, we illustrated his plans and designs of Ingram House, Fenchurch-street; in 1875-6

Messrs. Blashill & Haywood were the architects, after the Gothic style, of Christ Church, at Burn Hill, Beckenham. In November, 1903, he was appointed, with Mr. W. D. Caröe, and Mr. H. D. Searles-Wood, as a representative member of the Institute upon a joint Committee of the Plumbers' Company, the larger Water Authorities of the country, and the Institute, to inquire into the questions of waste of water, the technical education and registration of plumbers, and the efficiency of plumbing work in general. In May, 1902, Mr. Blashill was deputed, together with Mr. John Slater, to represent the Institute at the annual Congress of the Sanitary Institute, held in Manchester in September of that year; in 1901 he was an Examiner in Building Construction for the Science and Art Department, Royal College of Art, and he was appointed chairman of a conference upon the Standardising of Bricks, held jointly by the Institute, the Institution of Civil Engineers, and the Institute of Clay-workers, held at the International Building Trades Exhibition in April, 1901. At the annual general meeting of the Institute, on May 5, 1902, Mr. Blashill was elected on to the Statutory Board of Examiners in pursuance of the London Building Act of 1894, and other enactments in that behalf. Of Mr. Blashill's many treatises, papers, and similar work, we should instance his papers on "The Present Condition of the Building Industry," read to the Surveyors' Institution, and reported in our columns of March 2 and 9, 1901; "Unhealthy Areas and the Housing of the Working Classes," read at the Sanitary Institute Congress, Southampton (*Builder*, September 2, 1899); "Lessons from Fire and Panic," read at the meeting in Manchester of the Surveyors' Institution, and reported in our number of April 23, 1898; "Sanitary Construction, Warming, and Ventilation," a lecture delivered at Carpenters' Hall, London (November 4, 1899, report); "The Architect in Relation to Fire Prevention," read at a meeting of the Institute (December 23, 1899, report); "Housing of the Working Classes," read to a meeting of the Sanitary Institute (April 7, 1900, report); "Working-class Dwellings in Blocks," read to the Architectural Association (February 17, 1900, report, with plans); "The State of the London Streets," read to the Sanitary Institute (February 23, 1901, report); and "London Street Traffic," read to members of the Surveyors' Institution (April 30, 1904, report). Mr. Blashill read a paper upon Tintern Abbey to the Bristol and Gloucestershire Archæological Society several years ago, and was the author of "Sutton-in-Holdernesse, the Manor, the Berewic, and the Village Community," a work descriptive of the country-side before the making of enclosures in the XVIIIth century, of which he brought out a new edition in August, 1900, and of an essay upon "Oak or Chestnut in Old Timber Roofs," read to the Institute, and reported in the *Builder* of April 20, 1878.

GENERAL BUILDING NEWS.

METHODIST CHURCH, MALIN BRIDGE, SHEFFIELD.—A new church has been erected at Malin Bridge by the Methodist New Connexion. The length of the building is 60 ft., and the width over 36 ft.—across the transepts 52 ft. There is accommodation for 358 adults, or a mixed congregation of 450 persons. On the same floor are an organ chamber and vestries for minister and choir; and advantage has been taken of the steep slope of the ground to place a church parlour under the front end of the church, with kitchen, cloakroom, etc., adjoining. The walls are built of local stone, with rock face, and ashlar dressings to windows and doorways; and the roof, which is a tiled one, is supported on stained timber, with arched ribs and panelling. Pitch-pine is the material used for the partially open ceiling, and the same wood is used in all the joinery, except in regard to the rostrum, which is of walnut. The heating, on the low-pressure hot-water system, has been carried out by Messrs. Wright Brothers, of Sheffield. The architects are Messrs. John Wills & Sons, Derby and London; and the builders, Messrs. Chadwick & Co., of Rotherham.

RESTORATION OF ELVASTON CHURCH, DERBYSHIRE.—St. Bartholomew's Church, Elvaston, an ancient fabric, has been closed for about twelve months for restoration purposes, and it was reopened recently by the Bishop of Southwell. The present restoration comprises extensive repairs and improvements, and an enlargement of the chancel. New vestries have been built. The restoration of the ancient oak screen has been effected. The chancel has been lengthened by 11 ft., and a new sanctuary arch has been built where the former east end stood. The new sanctuary has no east window, but there is a reredos of carved white clunch filling the whole end. This is carved with subjects and figures, and is lighted by two traceried windows of three lights each, in the north and south walls of the sanctuary respectively. The glass which was at the east end, and which was much cracked, has been reproduced, and this is placed in the new north window of the sanctuary. The pavements of the sanctuary and chancel are of black-and-white marble. The floor of the nave under the seats is laid with wood blocks, and the passage with slate and white stone. In the nave the plaster has been removed from the walls, and stone ashlar work was found, which has been restored. So also with the piers and arches; the plaster was removed from them, and the stone is now seen, but the tomb and the arch above it on the north side of the nave have not been altered. The windows have been reglazed, and their stonework made good where injured or decayed. The chancel is fitted with oak stalls and fronts, on what was the old arrangement, and the nave and aisle are furnished with open seats of oak. The ends of the seats are carved with a linen-fold pattern. A new cross has been placed on the screen. A carved oak pulpit has been placed in what was the original position; it is surmounted by a canopy. One feature of the work has been the decorative painting of the roofs and parts of the walls. The sanctuary roof is enriched with gold and blue. The chancel roof is coloured red, treated decoratively, and has gilding on the crested carvings and bosses. The nave roof has been made uniform in tint, and deficient parts have been made good. Here, too, gilding has been used. Upon the west face of the chancel angels have been painted on either side of a representation of Christ in glory. The west side of the chancel arch is covered with scrolls. The work has been carried out, from the designs of Mr. G. F. Bodley, R.A., by Mr. Kett, of Cambridge. The decorative painting was by Mr. Jackson, of Ealing, under the architect's direction.

BAPTIST CHURCH, WALTON.—A new Baptist church has been opened in Winchester-road, Walton. The building, which is of red and white brickwork, with open-timbered slated roof, seats about 160 people in pews and chairs. The interior walls are cemented, with matchboard dado, and the heating and lighting is by gas. Mr. John Lee was the contractor for the work, the architect being Mr. A. Imber.

CHURCH SCHOOLS, HODTHORPE.—The new Church school, which has been erected at Hodthorpe, near Whitwell, has just been opened. The new building, which will seat 236 children (mixed and infants), is built of brick, with stone facings, and consists of a schoolroom, and other minor apartments. The architects were Messrs. Gibbs & Flockton, Sheffield, and the builders, Messrs. H. Vickers & Son, Nottingham. The contract price was 2,000*l*.

REBUILDING IN WEST LONDON.—Thomas's Hotel, Nos. 25-6, on the north side of Berkeley-square, has been pulled down for the erection, after Mr. F. T. Verity's plans and designs, of new buildings which will abut upon Jones-street and Bourdon-street at the side and rear, respectively. Extensive rebuilding is in progress on the east side of St. James's-street, where two sites have already been cleared—those of Nos. 23-7, between Ryder-street and Boodle's Club, for houses with shops, to be built by Messrs. Howard & Co., and Messrs. J. Grover & Son, contractors, and of Nos. 36 and 36A, with No. 64, Jermyn-street, between Jermyn-street and White's Club, for similar premises by Messrs. G. H. & A. Bywaters & Sons, after plans and designs prepared by Mr. W. Woodward for Mr. L. Thomas. Mr. Leslie W. Green is appointed architect of the premises that will take the place of Nos. 29-30, and of three houses in Bury-street, at the rear. In Albemarle-street the site lately occupied by St. George's Chapel is taken by Viola, Ltd., for a building planned and designed by Mr. Charles G. Miller.

THE BUILDING TRADE AT DARLINGTON.—Dulness seems to have been the chief feature in the building trade of the country during the past year, and Darlington, despite the satisfactory progress made in certain of its industries, has not escaped the prevailing depression. According to Mr. Winter, the Borough Surveyor, there has been a slight decline in the number of houses erected, and the plans passed for new buildings, compared with the preceding year. The number of plans passed was 191, a decrease of twenty comparing with 1903, whilst the houses erected last year numbered 348, as against 355. Over 1,500 houses have been erected in Darlington since 1900, many new residences having been built in the vicinity of Hopetown, the Park-lane district, the Eastbourne Park, and the north end of the town. Whilst there is a good demand for the smaller class of dwellings let to tenants clear of rates, many better-class houses, owing to over-building and increasing local rates are unoccupied. Recently plans were passed for fifty houses on the Greenbank estate, and more developments are expected. This will cause building to be brisk in that part of Darlington, but in other directions there seems to be a slackening down of speculative enterprise.—*Darlington Star.*

PUBLIC LIBRARY, CUBITT TOWN, LONDON.—On the 14th inst. a public library, which has been erected in Strattondale-street, Cubitt Town, Poplar, at the approximate cost of 5,000*l*., was opened. The library, which has been built from the designs of Mr. C. Harrold Norton, of Bedford-row, W.C., is in the classic style, the material employed in the front block being Bath stone from the Monk's Park quarries. The floors of the public rooms are laid with pitch-pine blocks on concrete, and the floors of the vestibule, porch, etc., are covered with terazzo mosaic. The library is capable of accommodating 23,000 volumes.

SUNDERLAND LAW COURTS.—The foundation-stone of new police buildings, which will be completed in about a couple of years, were laid on the 18th inst. at Sunderland. The scheme provides for a Quarter Sessions Court, an ordinary police court, and a fire brigade station. The two police courts are on the first floor of the main building, the fire station being a separate block. The Corporation offered premiums for competitive plans, and the first award, for a Renaissance building, was secured by Messrs. W. & T. R. Milburn, with whom were associated Messrs. Wills & Anderson, of London. The contractor is Mr. W. White, of Sunderland. The site of the new buildings is a central one, between the Corporation Baths in the High-street and the Avenue Theatre. The total cost of the scheme will be something like 40,000*l*.

NEW DISPENSARY AT THE WESTERN INFIRMARY, GLASGOW.—The new buildings for out-patients at the Glasgow Western Infirmary were opened on the 18th inst. They are situated to the west of the main infirmary block, and are entirely isolated from it. The dispensary forms part of a scheme for the extension of the infirmary to the west, and it will be joined to the main building by a corridor. Entering off this corridor is the electrical department, placed for both infirmary and out-patient departments. The entrance to the dispensary proper is from Church-street, a side street running north from Dumbarton-road, in which is situated the main entrance to the infirmary grounds. Entrance and exit gates are provided leading to courtyards separating the entrance and exit doorways. Patients enter by the east doorway, and, under the control of the porter, are directed, on their first visit, into the waiting-room for new patients, where all inquiries are made, the old patients passing into the general waiting hall. The new patients' waiting-room is 26 ft. by 16 ft., and is in communication with a diagnosis room for the examination and classification of cases. The diagnosis room is lighted by a vertical and roof light on the north side, and adjoining it is a room for the isolation of any suspicious or infectious cases. This room has a separate door to an ambulance court. The general waiting hall, 86 ft. by 31 ft., is seated for over 400 persons. The patients will be classified into groups for convenience of distribution into the various surgical and medical consulting-rooms; lavatory accommodation is provided in open courts adjoining the waiting hall. From the waiting hall the communication corridor leads eastward to the main operating theatre, 30 ft. by 29 ft., with gallery accommodation for sixty students. This room is lighted by vertical and roof light from the north, and has attached to it a sterilising and recovery-room, the latter divided for male and female patients. Above this there is a nurses' room for the preparation and storing of surgical dressings, etc. Immediately to the east of the waiting hall is the surgical dressing-room fitted with arm and foot sinks, and divided by enamelled slate partitions into separate compartments. Small lobbies lead off the waiting hall to the medical and surgical consulting-rooms, with their necessary dressing-rooms. At the west end the communication corridor leads into the ear, nose, and throat rooms, consisting of a consulting-room, 30 ft. by 24 ft., having gallery accommodation for fifty students, and communicating by a sliding door with a darkroom, 37 ft. by 24 ft., fitted with eighteen stalls for the examination of patients by artificial light. The dispensary hall, 30 ft. by 19 ft., is seated

for seventy persons, and has two service openings, with sliding doors from the dispensing-room, and adjoins the exit vestibule near the street. The dispensing-room is 30 ft. by 20 ft. Adjoining this room is the laboratory. The heating is done by low-pressure hot water. The ventilation is arranged on the extract principle, four electric fans being used for removing the vitiated air. The building has been constructed from plans prepared by Mr. John James Burnet, A.R.S.A., and Mr. Thomas Young, engineer, is responsible for the lighting and heating.

PROPOSED PUBLIC BUILDINGS, LEEDS.—An inquiry was held at the Leeds Town Hall, on the 20th inst., by Lieut.-Colonel A. C. Smith, R.E., an Inspector of the Local Government Board, into the application of the City Council for sanction to borrow 5,000*l.* for the erection of offices and other buildings at their new Highways depôt in Kirkstall-road. The new depôt will comprise offices, workshops, and a messroom. Mr. Bruce, the architect, submitted and explained the plans to the inspector, and the inquiry closed.

SANITARY AND ENGINEERING NEWS.

SEWAGE IN THE BRENT DISTRICT.—The Engineer to the Willesden District Council (Mr. O. Claude Robson) draws attention to this subject in his twenty-ninth annual report. He says:—"Writing in 1894 with regard to the treatment of sewage in the Brent district, I then found it my duty to point out the necessity, owing to the great extension of the district, for some additional works to be undertaken in order to maintain a sufficiently good standard of purity for the effluent discharged into the Brent river. In 1895 instructions were given for the preparation of plans for this purpose, the result being the expenditure of a sum of 57,374*l.* for the purchase of 52 acres of land, and the enlargement of the works incidental to treatment. Writing a decade later, I am constrained to point out the necessity for again carefully and speedily considering this much discussed question, the population having increased from 27,000 in 1894 to 60,000 in 1904, the latter being the exact figure submitted to the Local Government Board as the ultimate possible population for which the extended works of 1894 would be available. This great increase of double the population in less than ten years is perhaps unique in any town in this country, and when, in addition to this, it be considered how utterly unsuitable both land and river are for treatment, together with the separate financial responsibilities of this section of the district, the difficulties of the situation are summed up in a nutshell. The disadvantages under which the Brent district has suffered have been dealt with in various reports from myself upon more than one occasion, and it would now be useless to reiterate them, the main point for earnest consideration at the present moment being the most desirable method to adopt for the extension or alteration of the outfall works, in order to provide for the existing and future necessities of the district. To continue the present system of treatment by precipitation tanks, filters, and land, is altogether out of the question, no additional or suitable land for the final treatment being available. Three methods present themselves as means for solving the Brent difficulty, as stated in my previous reports, viz.:—

(1) Biological treatment at the site of the present works.
(2) A Brent valley scheme embracing the whole of the towns upon the river.
(3) The delivery of the sewage into the London sewers by agreement with the London County Council.

Of these three proposals the latter is, to my mind, the most desirable to adopt, if satisfactory terms can be arranged with the London authorities, and, with this in view, negotiations should be entered into at an early date to ascertain the possibilities of the proposition. Failing success in this direction, the valley scheme would doubtless be preferable to the continuation of the process of treatment upon the site of the present works, as, with the rapid development of the district, the works will ere long be entirely surrounded by houses of a small class character, forming practically a portion of Greater London, where it might be most undesirable for sewage works of any description to be situated. Looking, therefore, to a continuance of the abnormal growth of the district, rendered more than ever likely by recent schemes of tramway and railway promotions in the neighbourhood, it appears to me that the main endeavour of the Council should be, in the first place, to remove the works from their present locality, either by discharging into the sewers of the metropolis, by agreement with the London County Council, or in conjunction with the Middlesex County Council, in the promulgation of a Brent valley scheme. In the meantime every endeavour has been made with the limited plant available to maintain the works in a satisfactory manner, and to avoid pollution to the river into which the effluents are discharged. The precipitating tanks are unfortunately but little more than half the capacity that is desirable, and should be at once increased. The stiff clay land, so unsuitable for treatment, cannot be extended, but the existing area has been aërated as far as possible by ploughing and digging when cessation from the flooding of same is possible. The difficulty of leaving any area thus fallow may be fully understood when it be remembered that 76 acres only are available for the entire flow, which, during the past year, has been excessive owing to the abnormal rainfall. Great difficulty has been encountered in coping with the trouble, and this will be increased unless some tentative assistance is rendered in the shape of increased tank accommodation pending the final settlement of any new scheme to be adopted. Immediate steps should therefore be taken in this direction by doubling the capacity of the present tanks, as, whatever new scheme may be decided upon, some time must elapse ere it is complete for working, and in the meantime the district is not standing still, and the volume of sewage to be treated is daily increasing.

ENGINEERING STANDARDS COMMITTEE.—Mr. James C. Inglis, General Manager of the Great Western Railway, has been nominated by the Council of the Institution of Civ Engineers as one of their representatives on the Engineering Standards Committee, in the place of the late Mr. John Allen McDonald, Engineer-in-Chief of the Midland Railway.

WATER SUPPLY, RUSHDEN.—The new waterworks at Rushden are now nearly completed. The contractor is Mr. A. E. Nunn, whose tender amounted to 65,000*l.*, and the scheme was designed by Mr. R. E. Middleton, M.Inst.C.E.

DRAINAGE SCHEME, PARTRIDGE GREEN, SUSSEX.—On the 18th inst. a Local Government Board inquiry was held by Mr. W. O. E. Meade King, M.Inst.C.E., at the Partridge Green village hall, into the application of the Horsham Rural Council for a provisional order empowering them to acquire otherwise than by agreement land near Homelands Farm, West Grinstead, for purposes of sewage disposal for the hamlet of Partridge Green; for approval of a portion of the parish, including Partridge Green, being formed into a special drainage district, and for sanction to borrow money for the purposes. Mr. W. Vaux Graham, the engineer of the scheme, gave evidence, and stated that it was proposed to acquire 6 acres of land, of which 4¼ acres would be used, the remainder being acquired to enable them to make a straight fence. After some discussion the inquiry closed.

SMOKE PREVENTION IN STEAM BOILERS.—The prevention of smoke from bituminous coal burned in a steam boiler can only be attained in an economical and satisfactory manner by perfect combustion. To attain this end, the furnace must be arranged so that the gases given off by the "green" fuel, together with a proper supply of air, shall travel over the length of the fire at suitable velocity, adequate space beyond the furnace must be provided for combustion to be completed, and a sufficiently high temperature is essential. Externally-fired boilers can easily be provided with secondary combustion chambers, but Lancashire and Cornish boilers cannot, except so far as the flues may be made to answer the purpose, and the water-cooled furnace arch presents an additional drawback. However, the regenerative bridge, mentioned on page 60 in our last week's issue, and a gas-heated diaphragm, described by Mr. Peter Fyfe at a meeting of the Institution of Engineers and Shipbuilders in Scotland, are calculated to obviate these disadvantages in internally-fired boilers. A final requisite is scientific firing, which can best be insured by the adoption of a well-designed mechanical stoker. Still, as Messrs. W. H. Booth and J. B. C. Kershaw say in their paper on "Fuel Economy in Steam Power Plants," read before the Institution of Electrical Engineers:—"Mechanical stoking does not eliminate the need for correct furnace forms, or for sufficient temperature, and proper mixture of air and gas." The emission of black smoke is sometimes prevented by excess of air supply in connexion with mechanical stokers, but this always means loss of economy. The prevention of smoke without waste of fuel can only be achieved by the scientific design of furnaces, flues, and stoking apparatus, together with careful and intelligent management.

FOREIGN.

FRANCE.—The Department of L'Assistance Publique of Paris will shortly commence the works for the enlargement of the Cochin-Record hospital.——The Department of Beaux-Arts is about to carry out important artistic works for the decoration of the Salon d'Attente, called the "Salon des Autorités," which precedes the large amphitheatre of the Sorbonne. Part of this decoration is to be entrusted to M. Henri Martin.——M. Rodin has completed his model for a monument which is to be erected to the memory of M. Henry Becque, the dramatic author.——M. Emile Robert, architect, of Clamart, has obtained the first premium in the competition for a Government Palace at Lima (Peru).——M. Laboisne, Departmental Architect of La Charente, has been commissioned to carry out a new hospital at Barbezieux.——The municipality of Nancy has voted a sum of 610,000 francs for the formation of a public place in the new quarter of Sacré Cœur. They are also devoting 750,000 francs to various works of road improvement.——A monument to the memory of Alphonse Karr is to be erected at St. Raphael.——The twenty-fourth exhibition of the "Union des Femmes Peintres et Sculpteurs" will open on February 12 at the Grand Palais in the Champs Elysées, to close on March 9.——The Exhibition of the Association des Beaux-Arts of Cannes will open on March 1, to remain open during that month.

MINERALS IN EAST AFRICA.—In the annual report, just issued, on the East Africa Protectorate by Mr. Hobley, Assistant Deputy-Commissioner, it is stated that, during the past year, numerous South African colonists, many of them well acquainted with the class of rocks which bear mineral wealth, have traversed the country in several directions on the lookout for suitable land whereon to settle, but not one has reported any trace of the precious metals. Too much importance should not be attached to this negative evidence, but as year after year passes without some cheering discovery in this field one's hopes that East Africa may contain great mineral wealth cannot fail to decline. The Lusinga limestone continues to be worked and proves satisfactory, its discovery having made it practicable to erect a number of substantial stone residences and public offices at Kisumu at a reasonable price. Limestone deposits have also been discovered at Makindu, and the concretionary nodules so abundant along the Athi Valley are being utilised. It is also proposed to work the limestone beds near Voi, which were discovered by the Imperial British East Africa Company in 1892. Excellent bricks and tiles are turned out by the industrial section of the Church Missionary Society at Freretown, near Mombasa, but the industry has not yet attained any great dimensions. As it develops there is no reason why bricks should not oust the coral rag now used for building in Mombasa, and why tiles should not supersede the unlovely corrugated iron. The collector, Nandi, has also burnt a quantity of bricks in the vicinity of the Government station, with which a substantial house has been built.

MISCELLANEOUS.

PROFESSIONAL AND BUSINESS ANNOUNCEMENT.—Mr. James Williams, architect, of 11, Carteret-street, Queen Anne's Gate, S.W., has taken into partnership Mr. Edmund L. Wratten, and the name of the firm will in future be "Williams & Wratten."

COMPENSATION AWARDS.—As we recently announced, an award of 138,000*l.* was adjudicated by Mr. R. E. Middleton, who acted by request as umpire on the nomination of the Board of Trade, in respect of a claim preferred by Mr. W. H. Lever against the Corporation of Liverpool for their purchase of his property at Rivington for their waterworks and supply. The Corporation had offered 40,000*l.* for the land, and, it appears, are dissatisfied with the award, for Mr. Lever has taken legal steps to obtain specific performance of the agreement to purchase, and claims payment of the sum awarded, with interest, of his arbitration costs (some 10,000*l.*), and of damages.——At the Sheriff's Court, Red Lion-square, a special jury have awarded 27,432*l.* (an agreed sum of 972*l.* for fixtures and removal being included) to the lessee of the Athenæum public-house, in Camberwell New-road, rebuilt by him at a cost of 8,400*l.* in 1897, when forty-six years of the lease were unexpired, at an annual rent of 650*l.*, reducible to 150*l.* provided he purchased his draught beers from his landlords. Sir Edward Clarke, K.C., and Sir Edward Boyle, K.C., appeared for the London County Council, who have acquired the property, contending that ten years' purchase of the agreed total net profits, 18,900*l.*, plus the agreed sum of 972*l.*, would adequately compensate the lessee, who claimed about 34,000*l.* in all, and was

represented by Mr. C. A. Cripps, K.C., and Mr. Chester-Jones. Mr. Acland, K.C., and Mr. Simon, and Mr. Eldon Bankes, K.C., and Mr. Nepean appeared for the two mortgagees.——A jury have awarded 11,200*l.* to the owner of the freehold of three houses in Edgware-road and Bell-street, taken by the Baker-street and Waterloo Railway Company, who were represented by Mr. Daniel Watney, Mr. Douglas Young, and Mr. A. R. Stenning, the claimant's surveyors being Messrs. Edwin Fox & Bousfield, Mr. J. G. Head, and Mr. Elliott Tombs.——In the suit of Blundell *v.* the King Mr. Justice Wright has delivered a judgment, with costs, in favour of Mr. W. J. Blundell, owner of some property near Liverpool, a portion of which has been taken for the erection of a military fort. An arbitrator assessed the value of the land at 12,642*l.*, and the damages for injury to the rest at 5,000*l.* As the Secretary of State for War demurred to the payment of the 5,000*l.* for injurious affection of the estate, Mr. Blundell petitioned, raising the question whether, in taking land for defence works, the Crown is not liable to pay compensation on that account.——As arbitrator, Sir John Rolleston, M.P., has decided that the War Office should pay 46,725*l.* to St. Thomas's Hospital for 290 acres of the Averley Hall estate, near Purfleet, Essex, to be taken as a rifle-range. Sir E. Boyle, K.C., and Mr. Morton, and the Attorney-General, and Mr. H. F. Dickens, K.C., represented the claimants and the War Office respectively. Messrs. D. Watney, James Green, and W. H. Elwell gave evidence for the Crown, as for, say, 25,000*l.* compensation; on the other side Messrs. E. Tewson, A. Savill, W. Eve, and H. M. Cobb computed the total at about 84,700*l.*

ELECTRICITY SUPPLY: LONDON AND SUBURBS.—Amongst the Bills which have been prepared for next Parliamentary Session is a measure promoted by the Central Electric Supply Company, who seek for powers to take lands on the north-east side of Grove-road, St. John's Wood, for the erection of a generating and distributing station for the supply of a large number of metropolitan parishes on the north side of the Thames. Similar powers are sought by the County of London Electric Supply Company in respect of stations on the river Lea, at Bailey's-lane, Hackney, in Hill-street, Peckham, on the river Wandle, at Wandsworth, and in Graham-street, St. Luke's, and the supply of electrical energy or power in Tottenham, the City of London, and the boroughs of Hackney, Shoreditch, Southwark, Lambeth, and Battersea. A new undertaking, the East London and Lower Thames Electric Power Company, propose to produce energy and power for West Ham and the neighbouring urban districts and boroughs in the east and south-east of London, with works and stations in Grays Thurrock, Essex, Crescent Wharf, West Ham, in Blackwall-lane, and in Greenwich parish, wherein the specified lands extend over an aggregate of nearly 37 acres. Another fresh undertaking, the Administrative County of London and District Electric Power Company, will apply for leave to bring in a Bill to enable them to acquire a total of about 73 acres at or near Bradfield-road, West Ham, Angerstein's Wharf, Greenwich, and Town Mead-road, Fulham, with an area of supply extending over the administrative County of London and adjoining municipal boroughs and urban and rural districts in Middlesex, Surrey, Kent, and Essex.

MUNICIPAL COUNCILS AND ARCHITECTURAL WORKS.—A number of metropolitan borough councils have decided to take no action on a letter received from the Royal Institute of British Architects, forwarding a memorial urging that the work of official architects should be restricted to structures of secondary importance unless such officials shall have passed the qualifying examinations of the Institute, and that the designing, etc., of all buildings of a monumental character should be entrusted to independent architects, to be selected in such a way as may seem best to the local authorities. At the meeting of the Hampstead Borough Council last week, however, the views expressed in the Institute's letter were strongly supported, and a motion adopting same was carried.

APPOINTMENT.—Sir C. Purdon Clarke, C.I.E., Director for Art of the Victoria and Albert Museum, South Kensington, has been offered and has accepted the appointment of the Presidency of the national museum of America, the Metropolitan Museum, in Central Park, in succession to the late director, General di Cesnola. Sir C. Purdon Clarke will take up his new duties in the autumn.

INCORPORATED CHURCH-BUILDING SOCIETY.—This Society held its usual monthly meeting on Thursday, the 19th inst., at 7, Dean's-yard, Westminster; the Rev. Canon C. F Norman in the chair. Grants of money were made in aid of the following objects, viz.:—Building additional new churches at Clee, St. Aidan, near Grimsby, 125*l.*; Rushden, St. Peter, Northants, 100*l.*; and Elland All Saints, Yorks, 200*l.*, in lieu of a former grant of 55*l.*; rebuilding the church at Swinefleet, St. Margaret, Yorks, 50*l.*, in lieu of a former grant of 40*l.*; and towards enlarging or otherwise improving the accommodation in the churches at Northorpe, St. John the Baptist, near Lincoln, 15*l.*; and Purse Caundle, St. Peter, near Sherborne, Dorset, 10*l.* Grants were also made from the Special Mission Buildings Fund towards building mission churches at Beckton-road, Canning Town, London, E., 50*l.*, in lieu of a former grant of 35*l.*; South Shields, St. Oswin, Co. Durham, 10*l.*; Woodstone, St. Augustine, near Peterborough, 20*l.*; and Broker's Wood, All Saints, near Trowbridge, Wilts, 10*l.* The following grants were also paid for works completed:—Kennardington, St. Mary, near Ashford, Kent, 15*l.*; Newington, St. Mary, near Sittingbourne, Kent, 10*l.*; Little Ilford, St. Barnabas, Essex, 25*l.*, making in all 100*l.*; Feckenham, St. John the Baptist, near Redditch, 30*l.*; Hampton, St. Andrew, near Evesham, Worcs., 35*l.*; and Catford, St. Andrew, Surrey, 200*l.* In addition to this the sum of 240*l.* was paid towards the repairs of twenty churches from trust funds held by the Society. The Society likewise accepted the trust of a sum of money as a Repair Fund for the Church of St. Peter, Pentre, Glamorgan.

"THE LOCAL GOVERNMENT ANNUAL."—"The Local Government Annual and Official Directory" for 1905 (27A, Farringdon-street, E.C.) is the fourteenth year of publication of a most useful and compact little work, which has been carefully edited and brought well up to date. The main portion of the book is devoted to the directory, which gives the names and addresses of the chief officials of all corporations, London borough councils, county councils, boards of guardians, urban and rural district councils, county and borough asylums, etc., throughout the Kingdom, as well as the public libraries, public parks, and City companies of London. A feature is the insertion of the names of the chairmen of committees in the metropolitan boroughs, also the chairmen of the London County Council committees. The names and addresses of the members of the Metropolitan Water Board have been inserted, and a complete scale of charges in every district. Another section consists of a list of the various education committees in England and Wales. The title and locality of each are given, together with the name of the secretary. In addition to the directory, there is useful information relating to the public libraries, baths and washhouses, and electric light undertakings in the boroughs of London, and an abstract of the Local Government legislation of 1904. There is also a list of all the parks and open spaces of the metropolis, with the local authorities controlling them. The price of the "Annual" is 1s. 6d.

THE USE OF THE PATENT OFFICE LIBRARY.—It must have often happened to builders, architects, and others to have experienced difficulty in ascertaining the name and address of the makers of some article of which they required a duplicate or parts for repair. Most traders are doubtless familiar with the fact that a very large number of articles are stamped or marked with a registered number, but few probably are aware that, at the Free Library of the Patent Office, a register is kept wherein, after a short search, the name and address of the firm or person whose design bears one of the above-mentioned numbers may be found. To those who know this, and live sufficiently near London to make use of it, it has, no doubt, been very serviceable: but the recent decision of the Comptroller to forward information through the post on receipt of a small fee will now place this source of information at the service of traders all over the country. Any trader who desires to be furnished with a copy of the register relating to any particular article will, on application to the Comptroller of the Patent Office (Designs Branch), 25, Southampton-buildings, London, W.C., quoting the registered number of the article and enclosing a postal order for 1s., in due course, receive a copy of the entry. We cannot help thinking that this will prove a boon to many of our readers, and add to the usefulness of the Patent Office Library.

THE NEWCASTLE CITY WALLS.—A discussion took place at the annual meeting of the Newcastle Society of Antiquaries, on Wednesday, on the proposed demolition of the Plummer Tower and the preservation of the town walls. The Duke of Northumberland said that ancient monuments were often safest in private hands, but in cases like city walls, where none had an individual interest, public charge was desirable. He suggested it would be well if Newcastle's ancient walls could be placed in the care of a body appointed under the Ancient Monuments Act. It was pointed out that York, Canterbury, Southampton, and other towns with ancient walls were very proud of their walls, and it was resolved that the council of the society be instructed to take immediate steps with respect to the preservation and custody of the old towers and walls.

CAPITAL AND LABOUR.

EMPLOYMENT IN THE BUILDING TRADES.—Returns received from seventy-nine Employers' Associations show that employment in December was dull, and rather worse than a month ago. It was much worse than a year ago. Employment with carpenters and joiners was bad, and worse than a month ago and a year ago. The percentage of unemployed trade union carpenters and joiners was 11·5 at the end of December, compared with 10·1 in November, and 7·9 in December, 1903. With plumbers employment in December was bad and much the same as in November, but it was worse than a year ago. The percentage of unemployed trade union plumbers was 10·0 in December, compared with 10·2 in November, and 7·7 in December, 1903. With bricklayers employment generally was dull, and about the same as a month ago, but rather worse than a year ago. With masons it was dull generally, and worse than a month ago and a year ago. With painters employment was bad, although slightly better than in November; but it was worse than a year ago. Employment with plasterers was dull, and about the same as last month; it was worse than a year ago. With slaters and tilers employment was dull generally, but slightly better than a month ago; it was rather worse than a year ago.—*Labour Gazette.*

Legal.

LEEDS ANCIENT LIGHT DISPUTE.

MR. JUSTICE BRAY, in the King's Bench Division, on the 20th inst., delivered a considered judgment in the case of Ambler and another and the Bishop of Leeds upon a point of law raised in the form of a special case relating to the finding of the late Mr. Thos. Blashill, the umpire, appointed by the arbitrators in respect to the interference with the light to the plaintiffs' premises by the erection of the Roman Catholic Cathedral opposite. (The case was reported in last week's issue of the *Builder*.)

In this case the plaintiffs, the owners of premises in Cookridge-street, Leeds, contended that the cathedral opposite interfered with the ancient lights of their premises, part of which had been used by the plaintiff, Mr. H. Ambler, an architect, for the purposes of his offices, including a drawing office, for which a special amount of light was required. A slight but not material interference with light was caused to the parts of the plaintiffs' premises for which no special amount of light was required. Arbitration proceedings took place, and, in the result, the umpire awarded and found as follows:—"Notwithstanding the defendant's buildings, there remains sufficient light to the plaintiffs' premises for all purposes of ordinary user, and the plaintiffs are not entitled to damages for interference with such ordinary user; but if I am entitled to take into account damages which the plaintiffs have sustained in respect of loss of light to those parts of the premises used for occupation in respect of which a special amount of light is required, then I award 600*l.*" The umpire further added:—"At the request of both parties, I submit for the opinion of the Court above, whether, on the foregoing facts, I am bound by the decision in the case of the Home and Colonial Stores *v.* Colls, and therefore cannot award damages to the plaintiffs, or whether I can award damages in respect of interference with such special user of light as aforesaid." The arguments having concluded on the 14th inst., his lordship reserved his judgment.

His lordship, in giving judgment, said that, in examining the contentions put forward by the plaintiffs, it was necessary for him to see what was meant by the expressions which were to be found in the special case, and in the judgments of the House of Lords in the Colls' case, "ordinary user" or "ordinary business" or "ordinary purposes." He thought the word "ordinary" was used solely with reference to light, and an ordinary user or an ordinary business meant a user or business which, in fact, required only an ordinary amount of light. That was a question of fact, and must depend on the evidence in each individual case. He did not think that it was even mixed fact and law; but

if it were, he felt quite unable to see where the umpire had misdirected himself, or how he had misunderstood the Colls' case. The second point was as to whether use or enjoyment of a special light for twenty years gave a right to that special light, and thus enlarged the easement and increased the burden of the servient tenement. That point did raise a question of law. The umpire did not state as a fact that the owner of the servient tenement was aware that the premises were being used for business that required special light. It had been contended that the case ought to be sent back to the umpire on this point, but his lordship did not agree with that contention. A plaintiff had to prove his case, and if he did not prove a necessary part of his case he must fail. The only fact, therefore, to be dealt with was the use and enjoyment of the special light for twenty years. Did that give a right to it? This point was not decided in the Colls' case, but was referred to in some of the judgments, in which, however, there was nothing which assisted the plaintiffs' contention; on the contrary, their inclination seemed to be against it. There was a dictum in Lanfranchi *v.* Mackenzie distinctly opposed to the plaintiffs' contention if knowledge was not to be assumed, and the reasons there given for thinking that no right could be gained in the absence of knowledge seemed unanswerable. If the origin of the right to light was a supposed lost grant or covenant, as the cases seemed to show, who would presume that the owner of the servient tenement intended to grant a special right beyond the ordinary right when he was ignorant of the special user or enjoyment? He was prepared to go further, and hold that even twenty years' enjoyment to the knowledge of the servient tenement would not give a larger right. The result of the judgment in the Colls' case was to show that the test of the right was whether the obstruction complained of was a nuisance. If one turned to the nuisance cases, did one find any trace of the doctrine that a person carrying on a delicate trade was entitled to more freedom from annoyance than ordinary people because for twenty years his neighbours had been aware of the trade he was carrying on, and had left him undisturbed? He was not aware of any decision that suggested such a proposition, and it sounded absurd. In the judgments in the Colls' case, and in other cases, it was implied, if not expressed, that in measuring the quantum of light to which the owner of a dominant tenement was entitled, the purpose for which he desired to use or did use the light should be disregarded, and did not either enlarge or diminish the easement which he had acquired. If the true doctrine was that laid down in the Colls' case, that by twenty years' user all that was acquired was a right to prevent the defendant from building so as to interfere with the light previously enjoy so materially as to amount to a nuisance, it would be logically inconsistent with this doctrine to hold that a larger right could be acquired. If the only right capable of being acquired was sufficient light for the ordinary uses of inhabitancy and business, the owner of the servient tenement knew his exact position; he knew within reasonable limits how high he could raise his buildings, and whether, during the twenty years, it was worth while to obstruct his neighbour's windows. If a right to special light was capable of acquisition without his knowledge he could not know his position, and if he had notice of some special light being required for his neighbour's business, he could not measure the extent with any exactitude. He had, therefore, to decide this point against the plaintiffs. The umpire had found that sufficient light remained for all purposes of ordinary user. That finding was substantially the same as that on which, in the Colls' case, it was held that no action would lie. He thought, therefore, that judgment must be entered for the defendant.

Order accordingly.

A stay of execution was granted pending an appeal.

ACTION BY ARCHITECT AND SURVEYOR FOR FEES.

THE case of Tarring *v.* Aldridge came before Mr. Justice Phillimore and a special jury, in the King's Bench Division, on the 20th and 23rd insts., an action by Mr. Frederick William Tarring, an architect and surveyor, to recover from the defendant, a surveyor and auctioneer, of King-street, St. James', 248*l*., being professional charges for work done as an architect and surveyor for the defendant at his request from January to November, 1903. The claim was made up of two items—viz., 212*l*. 5s. for work done at the Castlemore Estate at Edmonton, and 35*l*. 15s. for work done at the Hill House Estate at Dartford.

The defendant, in his defence, denied that he employed the plaintiff to do the work on the terms alleged, and said it was an agreement between them that the plaintiff should only receive half of the fees which were paid to the defendant, and that the plaintiff should receive them when the defendant had been paid.

Mr. Clavell Salter, K.C., and Mr. Goddard appeared for the plaintiff, and Mr. Russell Spokes for the defendant.

Plaintiff was called and went into details as to the work he had done in connexion with the development of the estates at Dartford and Edmonton. He said his charges were in accordance with the scale of the Royal Institute of British Architects.

Cross-examined,

All the work was done for the defendant who never disclosed a client or suggested that he had one. His charges were fair and reasonable, and in accordance with the official scales.

Mr. Ernest Flint, F.R.I.B.A., examined, said he had carefully considered the accounts of the plaintiff and his plans and drawings, and, in his opinion, his charges were in accordance with the official scale of charges, and reasonable.

Mr. R. S. Wilkinson, A.R.I.B.A., generally corroborated the evidence of the last witness.

Cross-examined,

Architects and surveyors often worked together, but it depended upon agreement whether they divided charges. It was not an usual practice to divide the charges. But when professional men worked together they usually arranged terms, such as so much for the work done, and not a proportion of the charges. If he had work given him by a professional friend, and if he did all the work, he should expect more than half.

This being the plaintiff's case, the defendant was called. He said he met the plaintiff through a mutual friend, and a discussion took place about plans. Defendant said he had recently given up his drawing office and dismissed his staff as the work was so irregular, and that he was not doing that work himself. Plaintiff suggested that if witness wanted any plan work done reasonably, as from one surveyor to another, he would be very pleased to do it, and in the usual way between surveyors. At a subsequent date arrangements were made between the plaintiff and himself that the plaintiff was to charge him half fees, so that witness could charge the full fee. After doing certain little matters for him, he mentioned the Edmonton Estate matter to the plaintiff in February, 1903. Witness agreed to a fee of thirty guineas with his client, and that he would give the plaintiff half. Witness would not get his money till after the sale, and it was tacitly understood by plaintiff that he would receive his fees when witness got his. With regard to the Dartford Estate, witness did much work himself, but he was willing to divide fees as agreed. When he received his fees he would be willing to share same with the plaintiff. He would not feel justified in charging his client more than twenty guineas for work done in regard to that estate. In both instances he was working for clients. Plaintiff did not draw up a specification for him as it was not considered necessary. As soon as he heard of the plaintiff's claim he repudiated his charges. The charges were extortionate, in his opinion, and such as he could not charge his client.

Cross-examined,

He was not a member of the Surveyors' Institution, but belonged to the Auctioneers' Institute.

In reply to his lordship, the witness said he was not the owner of either of the estates. He was the auctioneer of the Edmonton Estate, and had made an arrangement that when the estate was sold he was to have as a share, with all his expenses being paid, 50 per cent. of the profit made, and his agreed thirty guineas. With regard to the Dartford Estate he was to have the usual estate agent's charges—twenty guineas.

Mr. Walter Hooker, a surveyor and auctioneer, of Croydon, examined, said he had had great experience in developing estates. There was no recognised custom as to the charges to be made as between surveyors. The usual practice observed amongst auctioneers and surveyors was to divide the percentage made on the work.

Mr. J. H. Adams, examined, said he was the owner of the Edmonton Estate, and his agreement with the defendant was that all the necessary plans were to be got out for thirty guineas. He also agreed with the defendant that he should have all his out-of-pocket expenses, and a half share of the profits when the estate was sold.

At the close of the defendant's case, Mr. Spokes addressed the jury on behalf of his client. He said that if the scale of the Royal Institute of British Architects was to be binding, it should be hung up in the office as the scale the member was going to charge. In that case a client would know all about it. In the case of solicitors it had required an Act of Parliament to enable them to charge a fixed scale of remuneration. Architects had got no Act of Parliament, and he protested in the name of the public against a small body of men sitting in a room and making out a scale which they sought to impose on the public.

Mr. Clavell Salter, in replying for the plaintiff, submitted that the defence was a shabby one, and not only a shabby one, but an untruthful one. His submission was that the defence set up was one which the jury could not accept as proved. In his opinion, the correspondence disposed of the suggestion of a special contract being entered into. He contended that, in the absence of any special contract, the plaintiff was entitled to the charges set out in the architect's circular. He did not understand the protest that Mr. Spokes made in the name of the public. Every man was entitled to get his charges in accordance with those recognised by his profession.

His lordship, in the course of his summing up, said it was open to the jury to reject the scale of the Royal Institute of British Architects altogether if they liked.

In the result, the jury returned a verdict for the plaintiff for fifty guineas, and judgment was given accordingly. The plaintiff was also granted a certificate for a special jury.

CASE UNDER THE WORKMEN'S COMPENSATION ACT.

THE case of Coles *v.* Anderson came before the Court of Appeal, composed of the Master of the Rolls and Lords Justices Mathew and Cozens-Hardy, on the 19th inst., on the appeal of the applicant from a decision of the County Court judge of Shoreditch in an arbitration under the Workmen's Compensation Act, 1897.

In this case Mrs. Coles, the applicant, was the widow of a workman who had died in consequence of an accident which had happened to him whilst in the service of the defendant. It appeared that Coles was engaged in making a trench so as to lay a pipe to connect the drain of a newly-built private house with the main sewer, the work being done by the defendant under a contract he had entered into with the local authority. At the time the accident happened the trench had been opened across the footway in front of the house, and Coles was working in the trench a short distance from the main sewer, but the main sewer was not tapped so as to connect the pipe with it until the day following the accident. The County Court judge held that the work on which Coles was engaged was not the construction, alteration, or repair of a sewer within the meaning of section 7 sub-sections 1 and 2 of the Act, and gave judgment for the defendant, with costs. The County Court judge, however, stayed execution pending the present appeal, and stated that if the appeal were allowed, there should be an award in favour of the applicant for 218*l*. 8s.

At the conclusion of the arguments of counsel their lordships allowed the appeal, holding that the learned County Court judge had misdirected himself by narrowing the meaning of engineering work, and by not including in it the antecedent ancillary work which was necessary for performing the actual work of alteration.

Mr. Blackwell and Mr. Martin O'Connor appeared for the appellant, and Mr. Chester Jones for the respondent on the appeal.

BUILDER'S APPEAL UNDER THE WORKMEN'S COMPENSATION ACT.

THE case of G. Hardy *v.* J. W. Quick came before the Court of Appeal, composed of the Master of the Rolls and Lords Justices Mathew and Cozens-Hardy, on the 20th inst., on the appeal of the defendant from the award of the County Court judge, sitting at Portsmouth, under the provisions of the Workmen's Compensation Act, 1897.

In this case the applicant was a workman in the employment of the defendant, who was a builder and contractor. It appeared that defendant was engaged in erecting for the Portsmouth Corporation a building upon certain land which adjoined the electrical generating station, which belonged to the Corporation, the new building being intended to be an extension of the generating station used for generating electric power. The generating station exceeded 30 ft. in height. While working on the new building, and in the course of his employment, the applicant was injured. When the accident occurred the trenches for the footings of the walls of the new portion of the building had been made.

and most of the footings had been put in the trenches, and in places the walls of the new building had been carried up about 20 ft. high. No part of the walls of the new building at the time of the accident had been actually connected with the existing building, but the footings upon which the walls of the new building were to be built were in touch with the wall of the existing building. No entrances or means of communication had at the time been made between the existing building and the new one. The end wall of the existing building was intended to form part of the new building when it was completed. The new building was being constructed by means of scaffolding, and the applicant was injured by falling off the scaffolding whilst carrying up building materials. The defendant's case was that the applicant's employment was not one to which the Act applied, as he was not, at the time of the accident, employed on, in, or about a building exceeding 30 ft. in height. The County Court judge, however, held that the applicant's employment came within the Act, as, in his opinion, if the two buildings were intended ultimately to form one building, or to form two buildings, to both of which an existing party or other wall was, or was intended, to be common absolute physical attachment of the new to the old building, was not necessary so long as the building operations were being carried on in connexion with, and having regard to, both buildings. He found, as a fact, that those footings so prepared extended up to, and were in absolute touch with, the wall of the existing building, and that such footings were a substantial part of the work of the new building. He accordingly made an award in favour of the applicant in the sum of 12s. 6d. a week.

At the conclusion of the arguments of counsel, their lordships held that the new building, being merely an extension of the old one, it could not be said that the two were separate, and therefore that the applicant was employed upon the extension of a building exceeding 30 ft. in height, and was thus entitled to compensation under the Act.

The appeal was accordingly dismissed, with costs.

Mr. Danckwerts, K.C., and Mr. Minton-Senhouse appeared for the appellant, and Mr. Ruegg, K.C., and Mr. John O'Connor for the respondent on the appeal.

DAMAGE THROUGH BUILDING OPERATIONS.

THE case of Bishop *v.* W. B. Mew, Langton, Bishop, & Co., came before Mr. Justice Warrington, sitting as an additional judge of the King's Bench Division, on the 19th and 20th insts., an action by the plaintiff, Mr. S. J. Bishop, of Union-street, Ryde, Isle of Wight, against the defendants to recover 200*l.* damages for injury caused to his premises by certain alterations carried out by the defendants, the adjoining owners.

Mr. Ernest Pollock, for the plaintiff, said that the premises were separated by a very old party wall only 4½ in. thick, which was half the usual thickness. In August, 1901, defendants began to make alterations to their premises for the purpose of adding one story to the height, and the plans were passed by the local authority. For the purpose of the new story defendants had to build a substantial wall, 11 in. thick. They did not rebuild the whole of the party wall from the bottom up, but put an 11-in. iron girder on the 4½-in. wall, so that half of it projected over the plaintiff's premises, and on that they built the 11-in. wall.

His lordship said that that was a technical trespass.

Mr. Pollock said that, in addition to mere trespass, the defendants had another difficulty to deal with. Their premises were very old, having been built in the early part of last century, and three joists had been carried into the party wall. There had been actual interference with these joists, with the result that considerable damage had been done to plaintiff's premises, which it would be necessary to alter.

Evidence having been given in support of the plaintiff's case, the defendants called expert evidence to prove that the damage complained of was due to the vibration inseparable from building operations, and could be remedied by the expenditure of a very small sum. It was also declared that the encroachment of the iron girder in no way affected the appearance of the plaintiff's shop or depreciated the value of his property.

In the result his lordship, in giving judgment, said that on the evidence he must come to the conclusion that the damage done to the plaintiff's shop was due to a wrong done by the defendants. He also thought that, while the plaintiff claimed too much, he was entitled to substantial damages in respect of the encroachment. On the whole he thought that justice would be done if he awarded the plaintiff 75*l.* damages and costs.

ERECTION OR DEMOLITION.

AT the Guildhall (City Summons Court), before Alderman Sir George Faudel-Phillips, Bart., Thomas Frost, foreman in the employ of Messrs. Staines & Sons, builders, 61, Great Eastern-street, E.C., appeared to answer two summonses, the first under the London Public Health Act, for removing old building material from a house in course of demolition during prohibited hours; the second for causing a van to be drawn up alongside the footway for the removal of the same. Police Constable Clements deposed that at 11.30 on the 11th inst. he saw two men in defendant's employ carrying old bricks, dried mortar, and concrete from the basement of No. 2, Camomile-street, in baskets to a van that was drawn up by the footway. He asked defendant whether he knew his men were committing an offence, when he replied, "That point has not been contested yet." He admitted that he was responsible for the men, and said they should stop bringing old material out and should only remove earth. Witness saw that the men continued bringing out the same stuff, with a top covering of earth. City Sergeant 78 corroborated this evidence, when defendant said his contention was that, inasmuch as he was rebuilding and not demolishing, he was not liable under this Act. The house had been pulled down by another firm, and he was employed to rebuild. In answer to Sir George, Constable Clements said the side walls of the house in question were standing. Sir George: I take it that in excavation prior to rebuilding you were removing some of the old foundation. I have it on sworn evidence that you were removing old bricks, etc., and that there was a dust from it on the footway. Defendant: But I was not demolishing, sir. Sir George: But you were removing refuse that was there through the act of demolition. Under the circumstances, however, I shall only order the payment of costs in both summonses.

PATENTS OF THE WEEK.

APPLICATIONS PUBLISHED.*

26,290 of 1903.—C. J. BARHAM: *Kilns for Drying and Burning Bricks.*

A combined brick burning and drying kiln, consisting in the combination with the burning and drying chamber or chambers of a radiator or radiators formed of metal flues leading from the burning chambers and lining the drying chamber, and finally opening thereinto, said radiator constituting the means for arresting the particles in suspension in the products of combustion which are passed through said radiator, and also for imparting heat to the drying chamber and for cooling the products of combustion before coming into contact with the bricks in the drying chamber.

28,773 of 1903.—R. HARRINGTON and WALTER MARTINEAU: *Lock-nuts for Screw-bolts.*

A lock-nut, consisting of a strip of suitable elastic material coiled on itself and tapped with a thread of slightly smaller diameter than that of the thread on the screw-bolt for which the nut is intended.

605 of 1904.—W. L. HALLEY: *Ships' Sidelights; also Applicable for Buildings and the like.*

This invention relates to ships' sidelights; also applicable for buildings and the like. Hitherto, when the hinged or swinging glass is open for ventilating purposes it is liable to be swung out of position when the vessel rolls or pitches. The invention consists in a means for securing or locking the open glass at any desired position or extent of opening. The hinged bolt of the frame holder carrying the glass is extended upwards so as to project beyond the top of the hinge. This projecting part is screwed to receive a screwed nut with a handle to it, so that by giving a motion of partial rotation to the nut the top of the hinge is bound or locked by the pressure of the nut. For this purpose the bolt of the hinge is locked or prevented from turning by passing a set screw through the socket of the hinge and through the bolt.

1,834 of 1904.—C. R. PENDOCK and S. EDWARDS: *Hoists, Lifts, or Elevators.*

Lifts or hoists, and the like, where the control rope passes through the interior of the cage, preventing, by the same combination of mechanism operated by one action from within the cage, the doors of any landing from being opened except when the cage is immediately opposite that landing, and, conversely, preventing the cage being set in motion until the approach doors are bolted, the arrangement being such that the mechanical freedom of the cage and of the control rope is not affected.

4,628 of 1904.—J. SHANKS: *Water-closets.*

A water-closet, consisting in the combination and arrangement of a casing in which works a weighted plunger actuated by a lever or handle and carrying a locking cam slot plate controlling a lever operating a discharge valve, the plate also actuating a supply valve in the casing, and having on it an incline capable of engaging a set pin in the casing, the casing being made in parts and so arranged that the position of the supply connexions and the discharge valve spindle may be altered to suit its being applied to the closet in various positions.

5,590 of 1904.—A. A. HOPKINSON: *Hoisting Apparatus.*

Hoisting apparatus, in which the hoisting ropes pass over a grooved driving pulley in opposite directions, the intermediate part of the rope hanging in a loose bight maintained by the weight of the rope itself.

11,321 of 1904.—H. LAMBERT: *Self-locking Nut.*

This invention relates to lock-nuts, and consists in so forming the two parts of a divided nut or of two separate nuts that the locking is effected by screwing back one of the nuts or parts, and conversely the unlocking is brought about when one of the nuts or parts is rotated towards the other, or when the two nuts or parts are rotated together to approach each other.

15,549 of 1904.—F. W. BROADBENT: *Burning of Pipes, Conduits, Chimney-pots, Channels, and other like Earthenware Goods in Kilns or Ovens.*

A bond, consisting of a plate having holes therein agreeing in position with the channels of the goods to be stood thereon, the side or edge of the plate being shaped to provide ventholes or passages when several are placed with their sides meeting, and either having projections thereon or not.

18,566 of 1904.—C. B. CREED: *Window Sashes.*

This relates to window sashes, whereby the danger attached to cleaning windows from the outside is overcome by the addition of a strip of wood at the edge of the sash to act as a runner for working the sash up and down, the screw by which the runner is screwed to the sash acting as a pivot for working the sash inwards.

21,877 of 1904.—W. PERRINS and JOSEPH NORTH: *Blind and like Rollers.*

A spring clip to partly embrace a blind roller for the purpose of clipping the upper edge of the blind between one end of the clip and the roller, the other end of the clip being or not serrated to prevent slipping.

24,796 of 1904.—A. A. GERY: *Tunnel Kilns for Burning Bricks or other Articles.*

A car for tunnel kilns, consisting in the combination with the angle-bar, side-frames, and connecting arch, of pyramidal skew-backs for the arch, and wedge-shaped spandrel blocks between said skew-backs and the vertical portion of the side-frames, the upper portion of said spandrel blocks being formed with inclined floor abutments.

25,528 of 1904.—A. MOHR: *Walls, Ceilings, and the like.*

Hollow ceilings and walls of beton, with or without iron insertions, formed of solid beton beams of suitable sectional form, if necessary with solid beton planks, interposed and so placed together as to form hollow spaces or chambers in the ceilings or walls, cement mortar, or the like being run in between the beams or sections so as to firmly connect them together.

25,551 of 1904.—G. P. WADSWORTH: *Means for and Method of Displaying Curtains, and the like.*

A rack for displaying curtains, and the like, comprising a fixed upright rod, and a number of rectangular or U-shaped arms or brackets extending horizontally therefrom, such arms being arranged to be turned or swung upon the said rod so that they slightly overlap each other vertically when closed, and can be opened out radially from the said rod.

25,692 of 1904.—W. FLETCHER EAVES: *Boiler Settings and Chimney Seatings therefor.*

A setting for containing a boiler, consisting in foundations sufficient to carry the boiler, a combustion chamber provided with baffles or deflectors, walls for forming return flues on either side of the boiler, and for supporting a saddle, such saddle being the uptake common to both such return flues, and also forming the base of a flue supporting an ordinary chimney.

* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

25,869 of 1904.—J. W. WYNN: *Sash Holders and Locks.*

This consists in the combination with a window, including a frame and a sash, slidably mounted in the frame of oppositely directed ratchet bars secured to the frame, at opposite sides of the sash, brackets secured to the sash at opposite sides thereof, dogs pivoted in the brackets and arranged for movement into and out of engagement with the ratchet bars, and means for holding the dogs yieldably in such position.

25,870 of 1904.—W. W. WISE, J. J. COOPER, and W. L. MILLER: *Nut Locks.*

A nut lock, comprising a bolt, having one of its ends screw-threaded and bifurcated, a screw-threaded nut having a working fit upon the screw-threaded end of the bolt, said nut having one of its faces roughened, and a T-shaped wedge fitting in such bifurcation that the head portion thereof registering with the roughened surface of the nut, the wedge having one side of its shank portion provided with teeth for engagement with one wall of the said bifurcation to prevent accidental withdrawal of the key therefrom, the head and shank portion of the key being formed of a single piece of material.

25,876 of 1904.—W. ECKSTEIN and G. F. PITTAR: *Joints of Glazing Bars.*

According to this invention a hole is made in the web of one of the bars through which is passed a key for locking the two bars together. When the key is in position it is upset on both sides of the web to prevent it from working out of the hole, but preferably a key split at one or both ends is used, the ends being turned over against the web after the key has been inserted into the hole.

25,888 of 1904.—H. HIERNAUX and H. LAVIOLETTE: *Construction of Roofs.*

This relates to a roof framing with equilibrated sides, characterised by a supporting vertical girder, from which the two sides are suspended, and the weight thereof equilibrated, and by the arrangement of a horizontal framework designed to resist lateral strains or stresses on either of the roof sides, the rafters and other necessary parts of the covering being arranged according to the desired form of roofing.

25,969 of 1904.—J. WETTER (C. W. Bals & Co.): *Door Locks.*

This consists in the combination of a door lock having a latch, with two pairs of spring-actuated shackles, one being adapted to hold the door in the open position, and the other to retain it in the closed position.

16,934 of 1904.—H. H. LAKE (W. M. Jewell): *Purification of Water.*

A method of purifying water, which consists in employing a reagent substantially insoluble in the water to be treated, adapted to react with the impurity to be affected to produce an insoluble compound, and effecting chemical reaction between such reagent and the impurity to be affected.

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

January 16.—By JONES, LANG, & Co.

City.—118, Queen Victoria-st. (business premises), u.t. 48 yrs., g.r. 186*l.*, y.r. 970*l.* £5,150
22 and 23, Fenchurch-st., and 2, Rood-la., area 3,400 ft., building lease for 80 yrs., let at per annum 1,920

January 17.—By DIXON & Co.

Sutton, Surrey.—Carshalton-rd., "Kristnapore," u.t. 89½ yrs., g.r. 7*l.*, e.r. 45*l.* 460

By MERVIN & ADAMS.

Leyton.—Canterbury-rd., "Beulah," f., p. .. 260

January 18.—By H. DONALDSON & SONS.

Hackney.—226, Amhurst-rd., u.t. 42¾ yrs., g.r. 6*l.*, p. 490

By W. A. ELLIS.

South Kensington.—17, Egerton-gdns., u.t. 71½ yrs., g.r., etc., 33*l.*, p. 5,125

By FORTESCUE & BRANSON.

Fulham.—34, Humbolt-rd., with forge, stabling, etc., f., e.r. 450*l.* 5,000
Bayonne-rd., f.g.r. 10*l.* 10s., reversion in 85 yrs. 294
Adeney-rd., f.g.r. 6*l.*, reversion in 85 yrs... 168
1, 3, 5, and 7, Burnfoot-av., u.t. 86 yrs., g.r. 20*l.*, y.r. 126*l.* 1,230
Hammersmith.—125, King-st. (s.), and 1, Down-pl., with warehouses and stables in rear, u.t. 35½ and 37 yrs., g.r. 10*l.* 6s., e.r. and y.r. 160*l.* (with goodwill) 2,080
127 and 129, King-st. (s.), u.t. 35½ yrs., g.r. 12*l.* 12s., y.r. 145*l.* 2,315
Chiswick.—31 to 49 (odd), Mawson-la., and 2 to 12 (even), Eastbury-gr., u.t. 90 yrs., g.r. 100*l.*, w.r. 676*l.* 3,250
30, Balfern-gr., f., y.r. 35*l.* 570

By DOUGLAS YOUNG & Co.

Camden Town.—13, Rochester-ter., u.t. 40 yrs., g.r. 6*l.*, y.r. 50*l.*; also i.g.r. 10*l.*, u.t. 40 yrs., g.r. nil 650

January 19.—By H. J. BLISS & SONS.

Bethnal Green.—207, 209, and 211, Cambridge-rd., and 73 and 75, Three Colt-la., f., w.r. 134*l.* 10s. £1,420
Hackney.—52 to 56, Nelson-st., u.t. 51 yrs., g.r. 17*l.* 10s., w.r. 175*l.* 10s. 1,410

By NEWBON, EDWARDS, & SHEPHARD.

Orpington, Kent.—1A and 1 to 6, St. Andrew's Cottages, f., w.r. 93*l.* 12s. 510
Dulwich.—24,26, 28, 36, 38, and 40, Rodwell-rd., u.t. 73½ yrs., g.r. 28*l.* 10s., w.r. 202*l.* 16s. 1,200

By STIMSON & SONS.

Vauxhall.—147, Vauxhall-walk (warehouses, yard, etc.), f., e.r. 75*l.* (including goodwill) 4,100
Battersea.—Carpenter-st., f.g. rents 40*l.*, reversion in 15 and 16 yrs. 920
Lambeth.—Site of 32 and 33, Albert-embankment, f. 600
Kennington.—53 and 55, Neville-st., f., w.r. 54*l.* 12s. 510
Lambeth.—9 and 10, Pratt-st., f., w.r. 78*l.* .. 760
Vauxhall.—8, Leopold-st., u.t. 57 yrs., g.r. 5*l.*, w.r. 32*l.* 10s. 240
South Lambeth.—2, Devonshire-rd., f., y.r. 45*l.* 740
Fentiman-rd., i.g.r. 30*l.*, u.t. 33 yrs., g.r. 4*l.* 35, 42, and 46, Thorne-st., u.t. 28 yrs., g.r. 18*l.*, w.r. 124*l.* 16s. 370
3, Meadow-pl., u.t. 63 yrs., g.r. 5*l.*, w.r. 33*l.* 16s. 680
1 and 2, Little Rutland-st., u.t. 50 yrs., g.r. 12*l.*, w.r. 57*l.* 4s. 280
Clapham.—92, Union-rd., u.t. 57 yrs., g.r. 6*l.*, y.r. 45*l.* 450
Wandsworth.—43, Dawlish-st., u.t. 26½ yrs., g.r. 3*l.* 11s. 9d., w.r. 26*l.* 435
Battersea.—27 to 35 (odd), Etruria-st., u.t. 57 yrs., g.r. 18*l.*, w.r. 128*l.* 14s. 150
21, Carpenter-st., u.t. 66 yrs., g.r. 4*l.*, w.r. 28*l.* 12s. 750
Lambeth.—69, York-rd. (s.), u.t. 18½ yrs., g.r. 10*l.*, y.r. 57*l.* 200
78, York-rd., u.t. 21 yrs., g.r. 12*l.*, y.r. 60*l.*.. 360
126, 128, and 130, York-rd., and 17, Chicheley-st., w.r. 198*l.* 2s.; also i.g.r. 43*l.* 6d. 8d., u.t. 13 yrs., g.r. 70*l.* 320
Bermondsey.—4, 6, 8, 12, 14, and 18, Guy-st., u.t. 8 yrs., g.r. 24*l.*, w.r. 218*l.* 8s. 730
Old Kent-road.—25, Ossary-rd., u.t. 34½ yrs., g.r. 5*l.*, w.r. 36*l.* 8s. 350
49 to 61 (odd), Ossary-rd., u.t. 34½ yrs., g.r. 35*l.*, w.r. 219*l.* 16s. 245
2, Olmar-st., u.t. 34½ yrs., g.r. 5*l.*, w.r. 39*l.* 1,600
Lovegrove-st., "Kent Cottage," f., w.r. 31*l.* 4s. 245
Pimlico.—75, Lillington-st., u.t. 24½ yrs., g.r. 5*l.*, y.r. 57*l.* 12s. 325
Cricklewood.—41, Ashford-rd., u.t. 88 yrs., g.r. 5*l.* 8s., y.r. 50*l.* 285
Stockwell.—54, 56, and 58, Aytoun-rd., u.t. 38¾ yrs., g.r. 21*l.* 1s. 6d., y.r. 120*l.* 630
Battersea.—36 to 44 (even), Sleaford-st., f., w.r. 79*l.* 6s. 850
Camberwell.—7 to 19 (odd), Goldie-st., u.t. 71½ yrs., g.r. 21*l.*, w.r. 172*l.* 18s. 600
Peckham.—1, Willowbrook-rd. (s.), u.t. 17¾ yrs., g.r. 3*l.*, w.r. 31*l.* 4s. 1,010
22 to 27, Ophir-ter., u.t. 45½ yrs., g.r. 15*l.*, w.r. 156*l.* 115
Old Kent-road.—2, Hyndman-st., u.t. 39¾ yrs., g.r. 4*l.*, w.r. 46*l.* 16s. 940
190

January 20.—By CARTWRIGHT & ETCHES.

Edgware-road.—1 and 2, Queen's-ter., u.t. 27 yrs., g.r. 100*l.*, w.r. 236*l.* 12s. 350

By HUNTER & HUNTER.

Hyde Park.—33, Craven-ter., f., y.r. 110*l.* 1,970
Kensington.—19, Colet-gdns., u.t. 86 yrs., g.r. 8*l.*, p. 510
Clapham.—31, 33, and 35, Haselrigge-rd., u.t. 57 yrs., g.r. 15*l.* 12s., y.r. 106*l.* 990

By PEMBERTON & BANKS.

Hyde Park.—7, Leinster-st. (s.), u.t 33½ yrs., g.r. 10*l.*, w.r. 79*l.* 6s. 370

By G. A. WILKINSON & SON.

Knightsbridge.—Montpelier-rw., f.g.r. 44*l.* 2s., reversion in 24¾ yrs. 1,700
Belgravia.—Elizabeth-st., the "Royal Oak" p.h., i.g.r. 60*l.*, u.t. 19 yrs., with reversion 930
Maida Vale.—Warrington-cres., i.g. rents 130*l.*, u.t. 54½ yrs., g.r. 25*l.* 2,100
Putney.—5, High-st. (s.), area 1,150 ft., f., y.r. 150*l.* 3,200

Contractions used in these lists.—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; p. for possession; e.r. for estimated rental; w.r. for weekly rental; q.r. for quarterly rental; y.r. for yearly rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; la. for lane; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; av. for avenue; gdns. for gardens; yd. for yard; gr. for grove; b.h. for beerhouse; p.h. for public-house; o. for offices; s. for shops; ct. for court.

MEETINGS.

FRIDAY, JANUARY 27.

Architectural Association.—Mr. J. B. Fulton and Mr. E. F. Reynolds on "Byzantine Architecture." 7.30 p.m.

Institution of Civil Engineers (Students' Meeting).—Mr. T. L. Matthews on "Concrete-making on the Admiralty Harbour Works, Dover." 8 p.m.

MONDAY, JANUARY 30.

Surveyors' Institution.—Discussion on (1) the paper by Mr. Stenning on "Urban and Rural By-Laws and suggested Amendments," and (2) the paper by Mr. Menzies on "Building By-Laws in Rural Districts." 8 p.m.

TUESDAY, JANUARY 31.

Northern Architectural Association.—Mr. J. Eadie Reid on "Designing for Mosaics and Stained Glass." 7.30 p.m.

Institute of Sanitary Engineers, Ltd. (Lectures in Practical Sanitary Science).—Professor H. Adams on "Supervision of Works in Progress." 7 p.m.

Society of Arts (Applied Art Section).—Messrs. E. Johnston and G. Hewitt on "Calligraphy and Illumination." 8 p.m.

Institution of Civil Engineers.—Mr. L. E. Clark on "Floating Docks." 8 p.m.

WEDNESDAY, FEBRUARY 1.

Architectural Association (Discussion Section).—Mr. A. C. Dickie on "Steps and their Treatment." 7.30 p.m.

Builders' Foremen and Clerks of Works' Institution.—Ordinary meeting of the members. 8 p.m.

Institute of Sanitary Engineers, Ltd.—Presidential address by Mr. J. A. Crowther: "The By-Laws." 7 p.m.

Society of Arts.—Sir William H. Preece, K.C.B., F.R.S., on "The Navigation of the Nile." 8 p.m.

Institution of Civil Engineers.—Students' visit to the National Physical Laboratory, Bushy House, Teddington. 2.30 p.m.

THURSDAY, FEBRUARY 2.

Royal Institution.—Professor W. Schlich on "Forestry in the British Empire," I. 5 p.m.

Society of Antiquaries.—8.30 p.m.

FRIDAY, FEBRUARY 3.

Junior Institution of Engineers (Westminster Palace Hotel).—A paper on "Recent Developments in Electric Lighting" will be read by Professor H. T. Davidge, Wh.Sc. 8 p.m.

SATURDAY, FEBRUARY 4.

Sanitary Inspectors' Association.—Twenty-second annual dinner, Venetian Chamber, Holborn Restaurant, 6.30 p.m.

TO CORRESPONDENTS.

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PRICES CURRENT OF MATERIALS.

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BRICKS, &c.

	£	s.	d.			
Hard Stocks	1	12	0	per 1000	alongside, in river.	
Rough Stocks and Grizzles	1	8	0	,,	,,	,,
Facing Stocks ...	2	5	0	,,	,,	,,
Shippers	2	5	0	,,	,,	,,
Flettons	1	8	0	,,	at railway depôt.	
Red Wire Cuts ...	1	14	0	,,	,,	,,
Best Fareham Red	3	12	0	,,	,,	,,
Best Red Pressed Ruabon Facing	5	0	0	,,	,,	,,
Best Blue Pressed Staffordshire ...	4	4	0	,,	,,	,,
Do. Bullnose	4	10	0	,,	,,	,,
Best Stourbridge Fire Bricks.....	4	8	0	,,	,,	,,
GLAZED BRICKS.						
Best White and Ivory Glazed Stretchers	12	0	0	,,	,,	,,
Headers	11	0	0	,,	,,	,,
Quoins, Bullnose, and Flats.....	16	0	0	,,	,,	,,
Double Stretchers	19	0	0	,,	,,	,,
Double Headers...	16	0	0	,,	,,	,,
One Side and two Ends	19	0	0	,,	,,	,,
Two Sides and one End	20	0	0	,,	,,	,,
Splays, Chamferred, Squints	20	0	0	,,	,,	,,
Best Dipped Salt Glazed Stretchers, and Header	12	0	0	,,	,,	,,
Quoins, Bullnose, and Flats.....	14	0	0	,,	,,	,,
Double Stretchers	15	0	0	,,	,,	,,
Double Headers...	14	0	0	,,	,,	,,
One Side and two Ends	15	0	0	,,	,,	,,
Two Sides and one End	15	0	0	,,	,,	,,
Splays, Chamferred, Squints	14	0	0	,,	,,	,,
Second Quality White and Dipped Salt Glazed	2	0	0	,,	less than best.	

BRICKS, &c.—(*continued*).

Thames and Pit Sand.....	7 0	per yard,	delivered.
Thames Ballast.....	5 9	,,	,,
Best Portland Cement	27 0	per ton,	,,
Best Ground Blue Lias Lime	20 0	,,	,,

NOTE.—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime.....12s. 0d. per yard, delivered.
Stourbridge Fireclay in sacks 27s. 6d. per ton at rly. dpt.

STONE.

	s. d.		
BATH STONE—delivered on road waggons, Paddington Depôt	1 6½	per ft. cube.	
Do. do. delivered on road waggons, Nine Elms Depôt	1 8¼	,,	,,
PORTLAND STONE (20 ft. average)—Brown Whitbed, delivered on road waggons, Paddington depôt, Nine Elms depôt, or Pimlico Wharf...	2 1	,,	,,
White Basebed, delivered on road waggons, Paddington depôt, Nine Elms depôt, or Pimlico Wharf...	2 2½	,,	,,

	s. d.		
Ancaster in blocks.....	1 11	per ft. cube,	deld. rly. depôt.
Beer ,, ...	1 6	,,	,,
Greenshill ,, ...	1 10	,,	,,
Darley Dale in blocks...	2 4	,,	,,
Red Corsehill ,,	2 5	,,	,,
CloseburnRedFreestone	2 0	,,	,,
Red Mansfield ,,	2 4	,,	,,
YORK STONE—*Robin Hood Quality.*			
Scappled random blocks	2 10	,,	,,
6 in. sawn two sides landings to sizes (under 40 ft. super.)	2 3	per ft. super.	,,
6 in. rubbed two sides ditto, ditto	2 6	,,	,,
3 in. sawn two sides slabs (random sizes)	0 11½	,,	,,
2 in. to 2½ in. sawn one side slabs (random sizes)	0 7½	,,	,,
1½ in. to 2 in. ditto, ditto	0 6	,,	,,
HARD YORK—			
Scappled random blocks	3 0	per ft. cube.	,,
6 in. sawn two sides, landings to sizes (under 40 ft. super.)	2 8	per ft. super.	,,
6 in. rubbed two sides ditto	3 0	,,	,,
3 in. sawn two sides (slabs random sizes)	1 2	,,	,,
2 in. self-faced random flags	0 5	,,	,,

	s. d.		
Hopton Wood (Hard Bed) in blocks	2 3	per ft. cube.	deld. rly. depôt.
,, ,, ,, 6 in. sawn both sides landings	2 7	per ft. super.	deld. rly. depôt.
,, ,, ,, 3 in. do.	1 2½	,,	,,

SLATES.

in. in.	£ s. d.		
20 × 10 best blue Bangor	13 2 6	per 1000 of 1200 at r. d.	
20 × 12 ,, ,,	13 17 6	,,	,,
20 × 10 first quality ,,	13 0 0	,,	,,
20 × 12 ,, ,, ,,	13 15 0	,,	,,
16 × 8 ,, ,, ,,	7 5 0	,,	,,
20 × 10 best blue Portmadoc	12 12 6	,,	,,
16 × 8 ,, ,,	6 12 6	,,	,,
20 × 10 best Eureka unfading green .	15 17 6	,,	,,
20 × 12 ,, ,,	18 7 6	,,	,,
18 × 10 ,, ,,	13 5 0	,,	,,
16 × 8 ,, ,,	10 5 0	,,	,,
20 × 10 permanent green	11 12 6	,,	,,
18 × 10 ,, ,,	9 12 6	,,	,,
16 × 8 ,, ,,	6 12 6	,,	,,

TILES.

	s. d.		
Best plain red roofing tiles .	42 0	per 1000 at	rly. depôt.
Hip and Valley tiles ...	3 7	per doz.	,, ,,
Best Brosely tiles.....	50 0	per 1000	,, ,,
Do. Ornamental tiles	52 6	,,	,, ,,
Hip and Valley tiles ...	4 0	per doz.	,, ,,
Best Ruabon red, brown, or brindled do. (Edwards)	57 6	per 1000	,, ,,
Do. Ornamental do	60 0	,,	,, ,,
Hip tiles	4 0	per doz.	,, ,,
Valley tiles	3 0	,,	,, ,,
Best Red or Mottled Staffordshire do. (Peakes).....	51 9	per 1000	,, ,,
Do. Ornamental do.....	54 6	,,	,, ,,
Hip tiles	4 1	per doz.	,, ,,
Valley tiles	3 8	,,	,, ,,
Best "Rosemary" brand plain tiles.....	48 0	per 1000	,, ,,
Best Ornamental tiles	50 0	,,	,, ,,
Hip tiles	4 0	per doz.	,, ,,
Valley tiles	3 8	,,	,, ,,
Best "Hartshill" brand plain tiles, sand faced.	50 0	per 1000	,, ,,
Do. pressed.....	47 6	,,	,, ,,
Do. Ornamental do	50 0	,,	,, ,,
Hip tiles	4 0	per doz.	,, ,,
Valley tiles	3 6	,,	,, ,,

WOOD.

	At per standard. £ s. d.	£ s. d.
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in	15 10 0	16 10 0
Deals: best 3 by 9.....	14 10 0	15 10 0
Battens: best 2½ in. by 7 in. and 8 in., and 3 in. by 7 in. and 8 in.	11 10 0	12 10 0
Battens: best 2½ by 6 and 3 by 6 ..	0 10 0	less than 7 in. and 8 in.
Deals: seconds	1 0 0	less thn best
Battens: seconds	0 10 0	,, ,, ,,
2 in. by 4 in. and 2 in. by 6 in....	9 0 0	9 10 0
2 in. by 4½ in. and 2 in. by 5 in....	8 10 0	9 10 0
Foreign Sawn Boards—		
1 in. and 1¼ in. by 7 in.	0 10 0	more than battens.
¾ in.	1 0 0	,,

WOOD (*continued*).

	At per load of 50 ft. £ s. d.	£ s. d.
Fir timber: best middling Danzig or Memel (average specification)	4 10 0	5 0 0
Seconds	4 5 0	4 10 0
Small timber (8 in. to 10 in.) ...	3 12 6	3 15 0
Small timber (6 in. to 8 in.)	3 0 0	3 10 0
Swedish balks	2 15 0	3 0 0
Pitch-pine timber (30 ft. average)	3 5 0	3 15 0
JOINERS' WOOD.	At per standard.	
White Sea: first yellow deals, 3 in. by 11 in	23 0 0	24 0 0
3 in. by 9 in.	21 0 0	22 10 0
Battens, 2½ in. and 3 in. by 7 in.	17 0 0	18 10 0
Second yellow deals, 3 in by 11 in.....	18 10 0	20 0 0
,, ,, 3 in. by 9 in.	17 10 0	19 0 0
Battens, 2½ in. and 3 in. by 7 in.	13 10 0	14 10 0
Third yellow deals, 3 in. by 11 in. and 9 in.	15 10 0	16 10 0
Battens, 2½ in. and 3 in. by 7 in.	11 10 0	12 10 0
Petersburg: first yellow deals, 3 in. by 11 in.	21 0 0	22 10 0
Do. 3 in. by 9 in.....	18 0 0	19 10 0
Battens.....	13 10 0	15 0 0
Second yellow deals, 3 in. by 11 in.	16 0 0	17 0 0
Do. 3 in. by 9 in.....	14 10 0	16 0 0
Battens.....	11 0 0	12 10 0
Third yellow deals, 3 in. by 11 in.	13 10 0	14 0 0
Do. 3 in. by 9 in.....	13 0 0	14 0 0
Battens.....	10 0 0	11 0 0
White Sea and Petersburg :—		
First white deals, 3 in. by 11 in.	14 10 0	15 10 0
,, ,, 3 in. by 9 in.	13 10 0	14 10 0
Battens	11 0 0	12 0 0
Second white deals, 3 in. by 11 in.	13 10 0	14 10 0
,, ,, 3 in. by 9 in.	12 10 0	13 10 0
,, ,, battens	9 10 0	10 10 0
Pitch-pine: deals.....	16 10 0	20 0 0
Under 2 in. thick extra	0 10 0	1 0 0
Yellow Pine—First, regular sizes	40 0 0	upwards.
Oddments	28 0 0	,,
Seconds, regular sizes.....	30 0 0	,,
Yellow Pine oddments	25 0 0	,,
Kauri Pine—Planks, per ft. cube .	0 3 6	0 5 0
Danzig and Stettin Oak Logs—Large, per ft. cube	0 2 6	0 3 6
Small ,, ,, ...	0 2 3	0 2 6
Wainscot Oak Logs, per ft. cube.	0 5 0	0 5 6
Dry Wainscot Oak, per ft. sup. as inch	0 0 8	0 0 9
¾ in. do. do.	0 0 7	—
Dry Mahogany—Honduras, Tabasco, per ft. super. as inch ...	0 0 9	0 1 0
Selected, Figury, per ft. sup. as inch	0 1 6	0 2 6
Dry Walnut, American, per ft. sup. as inch	0 0 10	0 1 0
Teak, per load	17 0 0	21 0 0
American Whitewood Planks, per ft. cube.....	0 4 0	—
Prepared Flooring—	Per square.	
1 in. by 7 in. yellow, planed and shot	0 13 6	0 17 6
1 in. by 7 in. yellow, planed and matched	0 14 0	0 18 0
1¼ in. by 7 in. yellow, planed and matched	0 16 0	1 0 0
1 in. by 7 in. white, planed and shot	0 12 0	0 14 6
1 in. by 7 in. white, planed and matched	0 12 6	0 15 0
1¼ in. by 7 in. white, planed and matched	0 15 0	0 16 6
¾ in. by 7 in. yellow, matched and beaded or V-jointed brds.	0 11 0	0 13 6
1 in. by 7 in. do. do.	0 14 0	0 18 0
¾ in. by 7 in. white do. do.	0 10 0	0 11 6
1 in. by 7 in. do. do. do.	0 11 6	0 13 6

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London, £ s. d.		£ s. d.	Or delivered Railway Vans, per ton.
Rolled Steel Joists, ordinary sections	5 15 0	...	6 15 0	
Compound Girders, ordinary sections	7 12 6	...	8 15 0	
Angles, Tees and Channels, ordinary sections	7 7 6	...	8 7 6	
Flitch Plates	7 15 0	...	8 5 0	
Cast Iron Columns and Stanchions including ordinary patterns	6 12 6	...	7 15 0	

METALS.

	Per ton, in £ s. d.		£ s. d.	London.
IRON—				
Common Bars	6 15 0	...	7 5 0	
Staffordshire Crown Bars, good merchant quality.....	7 5 0	...	7 15 0	
Staffordshire "Marked Bars"	9 10 0	...	—	
Mild Steel Bars.....	8 5 0	...	8 15 0	
Hoop Iron, basis price	8 15 0	...	9 0 0	
,, ,, Galvanized	16 10 0	...	—	
(*And upwards, according to size and gauge.)				
Sheet Iron, Black—				
Ordinary sizes to 20 g.	9 0 0	...	—	
,, ,, 24 g.	10 0 0	...	—	
,, ,, 26 g.	11 15 0	...	—	
Sheet Iron, Galvanised, flat, ordinary quality—				
Ordinary sizes—6 ft. by 2 ft. to 3 ft. to 20 g.....	12 0 0	...	—	
Ordinary sizes to 22 g. and 24 g.	12 10 0	...	—	
,, ,, 26 g.	13 10 0	...	—	
Sheet Iron, Galvanised, flat, best quality—				
Ordinary sizes to 20 g.	15 0 0	...	—	
,, ,, 22 g. and 24 g.	15 10 0	...	—	
,, ,, 26 g.	17 0 0	...	—	
Galvanised Corrugated Sheets—				
Ordinary sizes 6 ft. to 8 ft. 20 g.	12 0 0	...	—	
,, ,, 22 g. and 24 g.	12 10 0	...	—	
,, ,, 26 g.	13 5 0	...	—	
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. by 20 g. and thicker	11 0 0	...	—	
Best Soft Steel Sheets, 22 g. & 24 g.	12 0 0	...	—	
,, ,, 26 g.....	13 5 0	...	—	
Cut nails, 3 in. to 6 in.....	8 10 0	...	9 0 0	

(Under 3 in., usual trade extras.)

LEAD, &c.

	Per ton, in £ s. d.		£ s. d.	London.
LEAD—Sheet, English, 3lb. and up	15 10 0	...	—	
Pipe in coils	16 0 0	...	—	
Soil pipe	18 10 0	...	—	
Compo pipe.....	18 10 0	...	—	
ZINC—Sheet—				
Vieille Montagne .....ton	30 15 0	...	—	
Silesian.....	30 10 0	...	—	
COPPER—				
Strong Sheet.....per lb.	0 0 10	...	—	
Thin ,, ... ,,	0 0 11	...	—	
Copper nails ..... ,,	0 0 10	...	—	
BRASS—				
Strong Sheet..... ,,	0 0 9½	...	—	
Thin ,, ... ,,	0 0 10	...	—	
TIN—English Ingots ..... ,,	0 1 4½	...	—	
SOLDER—Plumbers' ..... ,,	0 0 6½	...	—	
Tinmen's..... ,,	0 0 8	...	—	
Blowpipe..... ,,	0 0 9	...	—	

ENGLISH SHEET GLASS IN CRATES.

15 oz. thirds	2¾d.	per ft.	delivered.
,, fourths.....	2d.	,,	,,
21 oz. thirds	3⅜d.	,,	,,
,, fourths.....	3d.	,,	,,
26 oz. thirds	4⅛d.	,,	,,
,, fourths.....	3¾d.	,,	,,
32 oz. thirds	5⅛d.	,,	,,
,, fourths.....	5d.	,,	,,
Fluted Sheet, 15 oz.....	3¾d.	,,	,,
,, 21 oz.....	4¼d.	,,	,,
⅛ Hartley's Rolled Plate	2d.	,,	,,
1/16 ,, ,, ,, ...	2¼d.	,,	,,
¼ ,, ,, ,, ...	2½d.	,,	,,

OILS, &c.

		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 1 5
,, ,, ,, in barrels	,,	0 1 6
,, ,, ,, in drums.....	,,	0 1 8
Boiled ,, ,, in pipes	,,	0 1 7
,, ,, ,, in barrels	,,	0 1 8
,, ,, ,, in drums.....	,,	0 1 10
Turpentine, in barrels	,,	0 3 4
,, in drums.....	,,	0 3 6
Genuine Ground English White Lead	per ton	19 15 0
Red Lead, Dry	,,	19 5 0
Best Linseed Oil Putty	per cwt.	0 6 6
Stockholm Tar	per barrel	1 12 0

VARNISHES, &c.

	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak.....	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 0
Fine Elastic Carriage.....	0 12 6
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 16 0
Finest Pale Durable Copal	0 18 0
Extra Pale French Oil	1 1 0
Eggshell Flatting Varnish	0 18 0
White Copal Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 6
Best Black Japan.....	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 6
Berlin Black	0 16 0
Knotting	0 10 0
French and Brush Polish	0 10 0

TERMS OF SUBSCRIPTION.

"THE BUILDER" (Published Weekly) is supplied **DIRECT** from the Office to residents in any part of the United Kingdom at the rate of 19s. per annum (52 numbers) PREPAID. To all parts of Europe, America, Australia, New Zealand, India, China, Ceylon, etc., 26s. per annum. Remittances (payable to J. MORGAN) should be addressed to the Publisher of "THE BUILDER," Catherine-street, W.C.

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TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 10 *a.m. on Thursdays.* [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building-owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.*, unless in some exceptional cases and for special reasons.]

* Denotes *accepted.* † Denotes *provisionally accepted.*

ACTON (Middlesex).—For factory and engine shed, for Messrs. Walter Turnbull & Co. Mr. John T. Hart, architect, Bedford-row, W.C. Quantities by Mr. W. G. Tutt, surveyor, 18, Ironmonger-lane, E.C.:—

C. Jones.....	£7,298	Moore & Page	£6,950
Winter	7,249	Penney & Co.	6,830
G. Bentley & Co...	7,150	Knight	6,780
Shepherd	6,999	Saunders*	6,720
Pratt	6,975		

BEMBRIDGE.—For excavating, etc., for and laying 913 yds. of 4-in. and 3,030 yds. of 3-in. pipes, etc., for the Isle of Wight Rural District Council. Mr. H. B. Cullin, Surveyor, Brooklands, Wootton, Isle of Wight:—

E. Smith & Co., Bristol £489 0 11
Streeter & Co., Freshwater, Isle of Wight‡ 473 3 10

‡ Subject to approval of bondsmen and references.

BEMBRIDGE.—For 980 yds. of 4-in. cast-iron socket pipes and 3,173 yds. of 3-in. cast-iron socket pipes, for the Isle of Wight Rural District Council. Mr. H. B. Cullin, Surveyor, Brooklands, Wootton, Isle of Wight:—

Ormesby Ironworks, Co., Ltd., Middlesbrough-on-Tees £416

TENDERS—*Continued on page* 107.

COMPETITIONS, CONTRACTS, AND PUBLIC APPOINTMENTS.

(For some Contracts, etc., still open, but not included in this List, see previous issues.)

COMPETITIONS.

Nature of Work.	By whom Required.	Premiums.	Designs to be Delivered
*Free Public Library	Borough of Nelson	50*l.*, 25*l.*, 15*l.*	Mar. 4
*Designs for School	Taunton Education Committee	See advertisement in this issue	Mar. 31

CONTRACTS.

Nature of Work or Materials.	By whom Advertised.	Forms of Tenders, etc., supplied by	Tenders to be Delivered
Hartshill Stones and Chippings	Bicester R.D.C.	J. W. Tubb, Highway Surveyor, Fewcott, Bicester	Jan. 28
Painting, etc., at Children's Homes	Sheffield Guardians	Superintendent of the Homes, Smilter-lane, Pitsmoor, Sheffield	do.
Drainage Works at Dagenham	Romford R.D.C.	J. Simmons, Engineer, Bank-chambers, Doncaster	do.
Street Works	Wallsend Corporation	G. Hollings, Borough Surveyor's Office, Hugh-street, Wallsend	Jan. 30
Private Improvement Works	Halifax Highways Committee	J. Lord, Borough Engineer, Town Hall, Halifax	do.
Cleaning, Painting, Varnishing, etc., Sunday Schools	Idle Primitive Methodists	At the School	do.
Outside Painting of Museum Buildings, High-street	Ipswich Museum and Library Com.	F. Woolnough, Secretary, Museum-buildings, High-street, Ipswich	do.
Renewal of Western Return End of E. India Wharf	Greenock Harbour Trust	R. Crawford, C.E., Engineer to Trustees, Greenock	do.
Materials for Longford Depot	Warrington Sanitary Works Com.	Manager, Longford Depot	do.
1,140 tons of Portland Cement	Stockport Corporation	J. Atkinson, Borough Surveyor, Stockport	do.
580 tons of Limestone Chippings	do.	do.	do.
4,500 tons of Broken Limestone	do.	do.	do.
230 tons of Creosote Oil	do.	do.	do.
One Wadsworths' Tumbler Cart	Warrington Paving, etc., Committee	T. Longdin, Borough Engineer, Town Hall, Warrington	do.
Two Hand-road Scraping Machines	do	do.	do.
Iron Foundry, Leeds	C. H. Taylor & Son	Howdill & Howdill, Architects, Oxford-row, Leeds	do.
Redecoration of Town Hall (part)	New Shoreham U.D.C.	A. W. Nye, Town Surveyor, New Shoreham	do.
Sewering, Paving, etc., Swinton Park-rd., Pendleton	Salford Corporation	Borough Engineer, Town Hall, Salford	Jan. 31
Materials for Cleansing Department	Warrington Sanitary Works Com.	Cleansing Superint., Central Sanitary Depôt, Howley, Warrington	do.
Erecting Buildings on New Site	Tavistock Lighting, Coal & Coke Co.	A. Francis, Secretary, Gasworks, Tavistock	do.
Roadworks, Culverden Down-road	Tunbridge Wells Borough Council	W. H. Maxwell, Borough Surveyor, Tunbridge Wells	do.
Sewage Disposal Works near Craghead	Lanchester R.D.C.	J. R. Lupton, Surveyor, Lanchester	do.
Completion of a Street at Skircoat, Halifax		Lister Coates, Arch., Midland Bank-chbrs, Waterhouse-st., Halifax	do.
Engineering Bricks, Portland Cement, Sand, etc.	Failsworth U.D.C.	G. F. Gray, Surveyor, Council Offices, Failsworth	do.
Latrines at Ilam Schools		Rev. G. Dalrymple, Ilam Vicarage	do.
Small Alterations at Markets, Stafford	Markets and Tolls Committee	W. Blackshaw, Borough Hall, Stafford	do.
Cooking Apparatus at Union Workhouse	Belfast Guardians	J. W. Robb, Clerk, Union Workhouse, Belfast	do.
Making-up Stoke Gardens	Slough U.D.C.	Surveyor, 1, Mackenzie-street, Slough	do.
Paving Setts	Sheerness U.D.C.	T. F. Berry, Surveyor, Council Offices, Trinity-road, Sheerness	do.
Class Room, etc., Blandford	Rev. J. Standfort	C. Hunt & Son, Architects, Blandford	do.
200 tons of Macadam	Eastleigh and Bishopstoke U.D.C.	W. Wallace Gandy, Surveyor to Council, Eastleigh, Hants	do.
Painting Branch Police Stations	Hull Corporation	J. H. Hirst, City Architect, Town Hall, Hull	Feb. 1
Private St. Imprvs., North End & Diamond-st. Estate	King's Lynn Corporation	H. J. Weaver, Borough Surveyor, Town Hall, King's Lynn	do.
Builder's Materials	Plympton St. Mary R.D.C.	F. E. Cleverton, 4, Buckland-terrace, Plymouth	do.
Ten Complete Feeder Pillarboxes with Bases	Stockport Corporation	A. J. H. Carter, Borough Electrical Engineer, Millgate, Stockport	do.
Ferro-Concrete Foundations for a Crane, Town Quay	Southampton Harbour Board	E. Cooper Poole, Engr., Harbour Office, Town Quay, Southampton	do.
A 25-ft. Span Road Bridge over Cobbin Brook	Waltham Holy Cross U.D.C.	W. T. Streather, Surveyor, Town Hall, Waltham Abbey	do.
100 yds. Drainage, Up. Ringorm Farm, Wester Elchies		E. D. Jameson, Bank of Scotland Buildings, Elgin	do.
An Annexe to Sewage Works Machinery Buildings	Eccles Corporation	E. Parkes, Town Clerk, Town Hall, Eccles	do.
Corrugated Iron Laundry, etc., at Hospl., Swattenden	Cranbrook R.D.C.	T. H. Crampton, Clerk, Cranbrook	do.
Coal Store	Barnoldswick U.D.C.	J. W. Thompson, Manager, Town Hall, Barnoldswick	do.
Road Works	Forfar District Committee	D. Ross, Surveyor, Brechin-road, Kirriemuir	do.
Road Materials, Boston, Lincs.	Holland C.C.	H. C. Johnson, Clerk, Sessions House, Boston	do.
Firebricks, Retorts, etc.	Salford Corporation	W. W. Woodward, Engineer, Gas Offices, Bloom-street, Salford	Feb. 2
Paving and Flagging Works	Leeds Corporation	City Engineer's Office, Municipal Buildings, Leeds	do.
Scavenging	Blaydon U.D.C.	R. Biggins, Sanitary Inspector, Blaydon-on-Tyne	do.
Lighting Hospital Buildings, etc., Leftwich	Northwich Rural, etc., Committee	J. Cawley, Architect, Bull Ring, Northwich	do.
Roads, Fencing, and Laying Drains and Water Pipes	do	do.	do.
Laundry Fittings, Disinfector, and Steam Boiler	do.	do.	do.
Painting Works, Public Baths, Kennington-road	M.B. of Lambeth	Borough Engineer, 346, Kennington-road, S.E.	do.
*Erection of Buildings, etc.	Hampstead Borough Council	Borough Engineer, Town Hall, Hampstead	do.
Cartage	Aldershot Gas & Water Co.	R. W. Edwards, Sec., Gas & Water Office, Victoria-rd., Aldershot	Feb. 3
Cast-Iron Spigot and Socket Pipes	Sheffield United Gas Light Co.	H. Thomas, Manager, Commercial-street, Sheffield	do.
Road Reconstruction, Ballyfolan	Naas No. 2 R.D.C. of Wicklow	D. J. Purcell, Clerk, Boardroom, Naas Workhouse	do.
Main Sewers	Shelley U.D.C. (Huddersfield)	T. A. Murray, Engineer, Independent Buildings, Sheffield	do.
75 tons Best Soft Blue Pig Lead	Manchester Corporation	Secretary, Waterworks Offices, Town Hall, Manchester	do.
Seven 24-in. Vertical Sluice Valves	do.	do.	do.
3,714 tons of Cast-Iron Pipes	do.	do.	do.
50 tons of Special Castings	do.	do.	do.
*Building of Show-yard	Somerset County Agricultural Asso.	A. B. Cottom, Surveyor, Bridgwater	do.
300,000 gallons of Creosote Oil	North-Eastern Railway Co.	E. H. Clark, Stores Superintendent, Gateshead	Feb. 4
Borehole, 240 ft. deep (Roundhills Tunnel)	Harrogate Corporation	E. W. Dixon, Engineer, 14, Albert-street, Harrogate	do.
Auchtermuchty Waterworks		H. Bruce, C.E., Cupar	do.
Cast-Iron Water Mains	Ilfracombe U.D.C.	O. M. Prouse, Engineer, Town Hall, Ilfracombe	do.
Rebuilding the Ancient Druid Inn, Hollybush, Mon.		Gustard & Waddington, Tredegar-chbrs., Bridge-st., Newport, Mon.	Feb. 6
Ten Double-deck Electric Tram Cars	Stockport Corporation	J. Atkinson, Borough Surveyor, Stockport	do.
Paving & Flagging Dickinson st. & Tunnicliffe's-yd.	Dewsbury Corporation	Borough Surveyor's Office, Town Hall, Dewsbury	do.
House Drainage Work	Manchester Corporation	H. Prescott, Man. of Hse. Drainage Dept., Town Hall, M'chester	do.
Ventilating Grids and Other Castings	do.	do.	do.
Annual Contracts	Bermondsey Borough Council	Town Hall, Spa-road, S.E.	do.
Making-up Private Streets	Dartford R.D.C.	W. Harston, Engineer, 8, Hythe-street, Dartford	do.
Supplies	Finsbury Borough Council	Boro' Surveyor's Department, Town Hall, Rosebery-avenue, E.C.	do.
*Drainage Works	Beckenham U.D.C.	Council's Surveyor, Beckenham	do.
*Annual Contracts	St. Pancras Borough Council	Borough Engineer, Town Hall, Pancras-road, N.W.	do.
*Making-up Roads	Dartford R.D.C.	W. Harston, Engineer, Hythe-street, Dartford	do.
*Supply of Aberdeen Granite Setts	Paddington Borough Council	Borough Surveyor, Town Hall, Paddington	do.
Two Boreholes	Widnes Corporation	Isaac Carr, Engineer, Widnes	Feb. 7
Painting Exterior of Asylum Extension, Humberstone	Leicester Corporation	E. G. Mawbey, Borough Engineer, Town Hall, Leicester	do.
Granite Supply	Lutterworth R.D.C.	J. Beatson, District Surveyor, Lutterworth	do.
Drawing Granite	do.	do.	do.
Thirty-five Houses at Bargoed	Aberdare Bargoed Building Club	E. G. Henton, Architect, 22, Cardiff-street, Aberdare	do.
Flints, Aylesbury	Bucks C.C.	R. J. Thomas, County Surveyor, County Hall, Aylesbury	do.
Branch Sewer in Western-road, Newick	Chailey R.D.C.	H. Weller, Barcombe, Lewes	Feb. 8
Stores and Materials	Bham., Tame, & Rea Dist. Drain. Bd.	Board's Offices, Tyburn, near Birmingham	do.
Road Materials	Birkenhead Corporation	C. Brownridge, Borough Engineer, Town Hall, Birkenhead	do.
Stores	do.	do.	do.
Team Labour, etc.	do.	do.	do.
Baths and Washhouses at Parkhead	Glasgow Corporation	A. B. M'Donald, City Engineer, 64, Cochrane-street, Glasgow	do.
Annual Contracts	Battersea Borough Council	W. M. Wilkins, Town Clerk, Town Hall, Battersea	do.
Annual Contracts	Hammersmith Borough Council	H. Mair, Borough Surveyor, Town Hall, Hammersmith	do.
*New Sashes to Windows, Leavesden Asylum	Metropolitan Asylums Board	Office of Board, Embankment, E.C.	do.
*Annual Contracts	Woolwich Borough Council	Borough Engineer, Maxey-road, Plumstead	Feb. 9
2,500 tons of Granite Setts	Hull Corporation	A. E. White, City Engineer, Town Hall, Hull	do.
Roadmaking, etc, Gloddaeth-street	Llandudno U.D.C.	E. P. Stephenson, Engineer, Town Hall, Llandudno	do.

CONTRACTS.—*Continued.*

Nature of Work or Materials.	By whom advertised.	Forms of Tender, etc., supplied by	Tenders to be Delivered
Cemetery at Ballyclare	Antrim R.D.C.	J. A. Hanna, C.E., 102, Donegall-street, Belfast	Feb. 9
Building a Gate Lodge at Cemetery	do.	do.	do
Stores	Chiswick U.D.C.	J. Barclay, Surveyor, Town Hall, Chiswick	do.
*Annual Contracts	C.B. of West Ham	Borough Engineer's Office, Town Hall, Stratford, E.	do.
*Sewerage Disposal and Refuse Destructor Works	Twickenham U.D.C.	Council's Surveyor, Town Hall, Twickenham	do.
Stores	Stockton-on-Tees Corporation	Borough Engineer, Town Hall, Stockton-on-Tees	Feb. 10
Stores	Belfast and County Down Railway	T. J. Brittain, Secretary, Queen's Quay Terminus, Belfast	do.
School-rm., Class-rms., etc., Wes. Chapel, Hessenford		W. Matthews, Hessenford, near St. Germans	Feb. 11
Materials	Warrington Water Committee	Water Engineer, Municipal Offices, Sankey-street, Warrington	do.
190,000 Jarrah or Karri Wood Paving Blocks	Bradford Corporation	J. H. Cox, City Surveyor, Town Hall, Bradford	do.
Materials	Blackburn Corporation	W. Stubbs, Borough Engineer, Municipal Offices, Blackburn	do.
Materials, Foundations, etc., for Hospital, Galleywood	Chelmsford Joint Hospital Board	A. S. Duffield, 96, High-street, Chelmsford	do.
Boys' School, Caergarw, Mountain Ash	Mountain Ash Education Committee	W. G. Thomas, Architect, Public Offices, Mountain Ash	Feb. 13
Stores	River Weaver Trustees	J. A. Saner, Engineer, Weaver Navigation, Northwich	do.
School and Alterations to Buildings, Beaminster	Grammar School Governors	R. Leigh, Clerk to Governors, Beaminster	do.
Materials	Bury Sewering, etc, Committee	A. W. Bradley, Borough Engineer, Municipal Offices, Bury	Feb. 14
Granite and Slag	Long Sutton U.D.C.	S. S. Mossop, Clerk, Long Sutton, Lincolnshire	do.
*Generating Station at South Kensington	H.M. Office Commissioners	H.M. Office of Works, Storey's-gate, S.W.	do.
13,359 yds. of 4-in. Mains, North Sunderland	Trustees of Lord Crewe's Charity	Offices of Trustees, Clayton-chbrs., 61, Westgate-rd., Newc.-on-T.	Feb. 15
1,299 yds. of 3-in. Mains, North Sunderland	do.	Anson & Shenton, Engrs., 28, Victoria-st., Westminster, London	do.
454 yds. of 2-in. Mains, North Sunderland	do.	do.	do.
Reservoir to hold 30,000 gallons, Ellingham	do.	do.	do.
Reservoir to hold 60,000 gallons, Seahouses	do.	do.	do.
Annual Contracts	Folkestone Corporation	A. E. Nichols, Borough Engineer, Corporation Offices, Folkestone	do.
*Works, Materials, and Services (One or Three Years)	Hampstead Borough Council	Borough Engineer, Town Hall, Haverstock Hill, N.W.	do.
*Additions, etc., Ladywell Workhouse, S.E.	Bermondsey Guardians	Guardians' Offices, Tooley-street, S.E.	Feb. 16
Roadworks, Firwood-av., Oak-gr., Stephen-st., etc.	Urmston U.D.C.	J. Heath, Surveyor, Council Offices, Urmston	Feb. 17
Materials and Hauling	St. Thomas R.D.C.	J. Bray, Surveyor, Alphington	Feb. 18
Cast-Iron Pipes (Water Scheme, Contract No. 1)	Chapel-en-le-Frith R.D.C.	Swann & Brady, Engineers, Town Hall, Chapel-en-le-Frith	do.
Waterworks and Materials (Contract No. 2)	do.	do.	do.
*Making-up Streets	Wanstead U.D.C.	Council's Surveyor, Council's Offices, Wanstead, N.E.	Feb. 22
*Additional Buildings at Hospital, near Dartford	Metropolitan Asylums Board	Office of Board, Embankment, E.C.	do.
Enlargement Oulton Council School Bldgs., Lowestoft	East Suffolk Education Committee	F. W. Richards, Architect, 14, Stanley-street, Lowestoft	Mar. 17
Pulling down Cottages, Queen-street, Lynn		H. T. Tilson, Architect, Railway-road, King's Lynn	No date.
Brick Water Tower at Vulcan Ironworks, Derby	Ley's Malleable Castings Co., Ltd.	E. R. Ridgway, Architect, Long Eaton	do.
Alters., etc. at Thrybergh Temporary Provided School	West Riding Education Committee	J. Vickers-Edwards, County Architect, County Hall, Wakefield	do.
House at Greenhill, Ystrad Rhondda	E. Llewellyn	Sunny Cottage, Ystrad Rhondda	do.
Demolishing Property on site of new Cotton Exchange		Matear & Simon, Archs., Century-buildings, N. John-st., Liverpool	do.
10-ft. Diameter Boiler, etc., for Steam Hopper Barge	Hartlepool Port and Harbour Com.	J. D. Howkins, Engineer, Town Hall, Hartlepool	do.
Concrete Founds. & Brick Superstruc. to Wa. Tanks	Shrewsbury Corporation	C. M. Johnston, Borough Electricity Works, Roushill, Shrewsbury	do.
500,000 Bricks, Teams Siding, Dunston		Sallow Bros., Builders, Dunston	do.
Fifty Houses at Chilton Colliery	H. Stobart & Co., Ltd.	Colliery Offices, Etherley	do.
Alters., etc., to Town Hall-bldgs., Sutton-in-Ashfield		J. P. Adlington, Architect, High-pavement, Sutton-in-Ashfield	do.
Infants' School, Buxton	Fairfield Endowed School Trustees	W. R. Bryden, F.R.I.B.A., George-street, Buxton	do.
*Nurses' Home at Workhouse, Bromley-by-Bow	Stepney Guardians	Clerk, Offices, Barnes-street, Commercial-road East, E.	do.
*New Buildings and Extensions to Workhouse, Redhill	Reigate Guardians	E. Penfold, Architect, High-street, Reigate	do.

PUBLIC APPOINTMENTS.

Nature of Appointment.	By whom Advertised.	Salary.	Applications to be in
*Quantity Surveyor	Hackney Borough Council	Not stated	Feb. 2
*Clerk of Works	Durham C.C.	3*l.* per week	Feb. 4
*Building Inspector	Hendon U.D.C.	200*l.* per annum	Feb. 6
*Inspector of Nuisances	do.	200*l.* per annum	do.
*Road Foreman	do.	2*l.* 10s. per week	do.
*Assistant Borough Surveyor	Taunton Town Council	150*l.*	Feb. 13

Those marked with an (*) are advertised in this number. *Competitions*, iv. *Contracts*, iv. vi. viii. x. *Public Appointments*, xvii.

TENDERS.—*Continued from page* 105.

BEMBRIDGE.—For 727 yds. of 9-in. earthenware glazed socketed pipes, for the Isle of Wight Rural District Council. Mr. H. B. Cullin, Surveyor, Brooklands, Wootton, Isle of Wight :—

G. Arthur, Newport, Isle of Wight £252 6 2

BEXLEY HEATH (Kent).—For sewer works (Christchurch part, Contract 6), for the Bexley Urban District Council. Mr. W. J. Lomax, engineer, 11, Fold-street, Bolton :—

S. Kavanagh & Co., Surbiton Hill* £489

BIRNIE (N.B.).—For 570 yds. of approaches to the new bridge across the River Lossie, near Hillhead, Birnie, for the County Council of Elgin. Mr. Alexander Hogg, County Road Surveyor, Elgin. Quantities by Surveyor :—

Approaches.

A. Nicholson ..	£398 9 2	J. Gordon	£219 17 1
J. Newlands ..	271 7 8	A. Falconer, Elgin*	216 3 5½
J. Milne & Son	247 19 7		
T. McLean ..	221 14 9		

Iron and Steel Work.

Redpath, Brown, & Co., Ltd.	£195 0 0
P. & W. Maclellan & Co., Ltd. ..	190 6 10
W. McKinnon & Co.	173 15 0
J. Abernethy & Co., Aberdeen* ..	169 15 0

BOGNOR.—For the erection of a pair of villas, Marine-parade, Bognor, for Mr. C. R. Cross. Mr. E. E. Homer, architect, 35, Bucklersbury, E.C. :—

L. Harris, London* £4,805

CARLISLE.—For new drainage at Fusehill Workhouse, for the Guardians. Mr. G. Armstrong, architect and surveyor, 24, Bank-street, Carlisle :—

D. Thomson & Son	£608 14 8	T. Laing & Son	£418 0 0
T. & R. Bell ..	446 11 10	G. Hill & Son	409 0 0
J. Beaty	426 7 0	Gordon & Logan, Carlisle*	367 7 5
W. Baty	420 0 9		

CRICKLADE.—For 4,000 yds. of 4-in. and 2,300 yds. of 3-in. cast-iron water mains, etc., for the Cricklade and Wootton Basset Rural District Council. Mr. F. Redman, engineer, 34, Wood-street, Swindon :—

W. B. Winchcombe, Wroughton, Swindon £3,748 3

DOVER.—For 1¼ miles of double-line light railway to the river, for the Town Council :—

	With Chalk and Clinker Ballast.	With Beach Ballast.
R. & G. Brisley	£13,460 0 0	£13,690 0 0
S. Pearson & Son, Ltd.	14,570 16 5	14,570 16 5
G. Holloway	12,989 6 8	13,185 0 0
R. Woods & Co.....	12,502 10 0	—
G. Wimpey & Co...	13,230 14 3	13,386 0 0
British Electric Equipment Co., 11, Victoria-st., E.C.*	10,353 2 8	10,408 17 9
W. Griffiths & Co...	11,811 19 0	12,104 0 0
T. C. Starkey.....	13,193 12 10	13,157 19 10
G. Law.....	12,994 0 0	13,229 0 0
G. Trentham	14,880 0 0	15,000 0 0
R. W. Blackwell & Co.	13,064 6 6	13,184 6 6
T. L. Scott & Co. ..	12,120 6 7	—
Dick, Kerr, & Co., Ltd.	12,883 4 0	13,083 4 0
Fry Bros.	14,467 7 7	—

EPPING (Essex).—For additions to the Administrative block of the Isolation Hospital at Rood-street, near Epping, for the Rural District Council. Mr. Horace White, architect, Loughton, Essex :—

T. Keen	£260 11 6	J. Whiffin & Son	£189 0 0
R. Warriner ..	251 0 0	P. Wood & Sons, Epping*	159 18 0
Palmer Bros...	245 0 0		
C. T. Foster & Son	238 0 0		

EXETER.—For erecting shops and dwellings at 29 and 30, Bridge-street, for Mr. Troke. Mr. R. M. Challice, architect and surveyor, 14, Bedford-circus, Exeter :—

Ham & Passmore..	£2,041	Westcott, Austin, & White, Exeter* ..	£1,740
L. Smale	2,022	G. Setter	1,700
W. G. Coles	1,996	C. Heath	1,698

HELSTON.—For erecting a secondary school, Penrose-road, for Cornwall Education Committee. Mr. W. J. Winn, architect, Helston :—

Richards & Frezise	£1,410
W. J. Winn, Helston*	1,275

KIDDERMINSTER.—For erection of engine-house, boiler-house, and chimney-stack, etc. (Water Supply, Contract No. 3), for the Corporation. Messrs. Willcox & Raikes, engineers, 63, Temple-row, Birmingham :—

R. H. B. Neal, Ltd.	£12,813 0 0	H. Smith ..	£10,266 0 0
W. Willetts & Sons ..	11,979 0 0	G. Law	10,155 0 0
J. Jackson	11,560 0 0	T. Lowe & Sons	9,950 0 0
A. B. & M. J. Tilt.....	11,514 16 2	C. Griffiths	9,850 0 0
J. Guest & Son.....	11,500 0 0	G. E. Jackson	9,548 0 0
J. Meredith	10,930 0 0	E. Haycock & Sons ..	9,400 0 0
M. Warrington	10,723 8 8	T. Vale & Sons, Stourport*	9,295 0 0
C. A. Horton	10,688 0 0	H. Dorse ..	9,172 0 0

LEIGH-ON-SEA.—For extension of engine-house at the waterworks, Canvey-road, for the Urban District Council. Mr. W. J. Petch, surveyor :—

A. & H. Holding	£371 10 9	F. J. Green ..	£311 15 0
R. Elvey	348 13 6	H. E. Johnson	306 4 8
A. J. Davisson	336 5 9	J. J. Yaler, Leigh-on-Sea*	298 4 0
A. J. Golding..	333 15 5	F. & E. Davey, Ltd.	295 0 0
J. H. Matthews & Son	325 10 2		

LONDON.—For erecting an engineer's cottage at the North-Eastern Fever Hospital, St. Anne's-road, Tottenham, N., for the Metropolitan Asylums Board. Mr. W. T. Hatch, Engineer-in-Chief :—

F. W. Harris & Co., Ltd.	£690 0 0	T. Cole	£571 0 0
J. J. Richards	680 0 0	G. Wilby, Blackstock Works, Blackstock-road, Finsbury Park, N.*	510 0 0
Aldridge & Son	671 0 0		
Smith & Barber	637 18 7		
W. Dudley....	626 0 0		
S. Kind	625 0 0		

LONDON.—For erecting an engineer's cottage at the North-Western Fever Hospital, Lawn-road, Hampstead, N.W., for the Metropolitan Asylums Board. Mr. W. T. Hatch, Engineer-in-Chief :—

J. J. Richards	£750 0 0	T. Cole	£583 0 0
F. W. Harris & Co., Ltd.....	667 0 0	G. Wilby, Blackstock Works, Blackstock road, N.*	570 0 0
Aldridge & Son	667 0 0		
Smith & Barber	661 10 3		
F. G. Taylor ..	596 0 0		

The Engineer-in-Chief's revised estimate was £550.

LONDON.—For making-up roadway and paving footways of Hugon-road (Section 2), for the Fulham Borough Council. Mr. Francis Wood, Borough Engineer, Town Hall, Fulham, S.W.:—

Roadway.

B. Nowell & Co.	£271 0 0	G. Wimpey & Co.	£225 0 0
L. Sommerfield	240 16 6	H. J. Greenham*	219 0 0

Footways.

Imperial Stone Co.‡	£57 0 0	Atlas Stone Co.‖	£53 5 9
Surveyor's Tender§	55 0 0	Atlas Stone Co.¶	45 13 6

‡ Imperial stone. § Clinker flags. ‖ 2½-in. Atlas stone (no deposit). ¶ 2-in. Atlas stone (no deposit).

LONDON.—For forming and laying a new road to the Medical Superintendent's house and removing wall at North-West Fever Hospital, Hampstead, for the Metropolitan Asylums Board. Mr. W. T. Hatch, Engineer-in-Chief:—

T. C. Starkey	£282 4 10	Grounds & Newton	£145 0 0
F. Fowles	220 0 0	G. Bell	141 0 0
H. Woodham & Sons	200 0 0	C. W. Killingback & Co.	139 0 0
S. Kavanagh & Co.	198 0 0	J. C. Trueman, Oaklands, Swanley Junction*	130 0 0
R. Ballard, Ltd.	176 0 0		
T. Adams	169 0 0		
R. E. Mayo	165 0 0		

LONDON.—For sanitary work and decoration to 44, Gloucester-road, Finsbury Park, for Mr. A. Heathorn:—
G. Robinson, Andover Works, Andover-road* £150

LONDON.—For the erection of the temporary end screen required for the first portion of the Greenwich electricity generating station, for the London County Council:—

Humphreys, Ltd.	£2,441 2 5	J. McManus	£1,875 18 0
H. Lovatt, Ltd.	1,879 14 9	W. Harbrow, London*	1,437 0 0

MERTON.—For erection of office and cart, tool, and steam-roller sheds, Kingston-road, for the Croydon Rural District Council. Mr. R. M. Chart, F.S.I., Union Bank-chambers, Croydon:—
W. Roberts, Dennett-road, Croydon* .. £510 5 6

NEWLYN (Cornwall).—For erecting four dwelling-houses at Church-street, for Mr. Brighton. Mr. H. Madden, architect, 13, Clarence-street, Penzance:—

Whole.

J. Nicholas	£754 9	Hosking & Lavers	£705 0
W. Grenfell	716 18		

Masonry Only.

J. Nicholas	£530 9	R. Hosking, Heamoor, Penzance*	£421 0
C. Tregenza	510 0		

Carpentry Only.

R. Walters	£275 14	J. Bodinnar	£224 0
J. Berryman	243 1	W. Greenfell, Mousehole*	206 18
J. Rowe	225 0		

ROXBURGH and DISTRICT (Board of Lunacy).—For erecting a wing for female patients at the Asylum, Melrose, for Roxburgh District Board of Lunacy. Messrs. Sydney Mitchell & Wilson, architects, 13, Young-street, Edinburgh:—

A. Meiklejohn	£8,595 0 7½	W. Scott	£7,592 0 0
R. Hall & Co.	8,211 0 0	H. T. & R. Montgomery	7,428 10 0
J. Adam & Co.	8,111 0 0	Neil, McLeod, & Sons	7,363 0 0
A. Herbertson & Son	8,000 0 0	J. & F. Forrest	7,176 0 0
J. Spiers	7,985 4 0	Scott & Brown	7,058 14 0
A. Inglis & Sons	7,710 0 0	A. Calder, 13, Barclay-place, Edinburgh*	7,050 0 0
W. Linton	7,674 8 3		
A. Scott & Sons	7,595 0 0		

READING.—For the erection of coachman's cottage at Theale, for Miss Deacon. Mr. E. A. Tyler, architect, 19, Melody-road, Wandsworth, London, S.W.:—

Sisley & Gibbs	£530 0	J. Jenkins & Co.	£387 9
S. Danton	395 0	J. Cronk*	360 0
W. Wigmore	388 10		

SHINCLIFFE (Durham).—For sewerage works, for the Durham Rural District Council. Mr. G. Gregson, Surveyor, 38, Saddler-street, Durham:—

J. Thompson	£382 16 9	R. Oliver	£295 0 0
W. Proudlock & Co.	301 15 4	J. Carrick, The Peth, Durham*	288 9 9
J. G. Bradley	298 10 0		

SOUTHAMPTON.—For erecting ten cottages on the area north of Simnel-street, for the Corporation. Mr. C. J. Hair, architect, 23, Portland-street, Southampton:—

H. Stevens & Co.	£2,631 0	F. Osman	£2,457 10
L. J. Richards	2,520 0	Exors. of W. Franklin	2,393 0
H. J. Hood	2,506 15	Golding & Ansell	2,290 0
T. H. Stiles	2,470 0	J. Nichol, Southampton*	2,232 0
Jenkins & Sons, Ltd.	2,466 0		

STRABANE (Ireland).—For extension of sewers at the Workhouse, for the Guardians. Mr. W. Stuart, M.E., Stuart:—
G. Anderson, Meeting House-street, Strabane £175

STRATFORD-ON-AVON. — For alterations and repairs to property in Henley-street, for the Trustees of Shakespeare's Birthplace. Mr. E. G. Holtom, architect, 58, Henley-street, Stratford-on-Avon:—

G. Euston	£489 8 6	E. T. Kennard, Stratford-on-Avon*	£430 10 0
J. Harris & Son	486 0 0		
J. Ward & Co.	474 9 0		

STROUD.—For water pipes (600 and 700 yds. of cast-iron socket-jointed pipes), for the Urban District Council. Mr. G. P. Milnes, Engineer, Town Hall, Stroud:—

(7-16 *Metal, about* 2 *cwt.* 2 *qrs.*)

Stavely Coal & Iron Co., Ltd., Staveley Iron Works, near Chesterfield ..... £4 12 6 per ton.

TRURO.—For the erection of new boundary wall and conveniences at the St. Mary's Wesleyan Day School, Truro. Mr. Alfred J. Cornelius, architect, Truro:—

W. H. Dyer	£223 0	M. Clemens	£170 0
J. Collwin	179 0	H. Tippett*	165 10

WALLINGTON (Surrey).—For erecting a cottage and sheds at Stores Depot, Bute-road, for the Croydon Rural District Council. Mr. R. M. Chart, F.S.I., Union Bank-chambers, Croydon:—
E. J. Burnand, Wallington* £1,390

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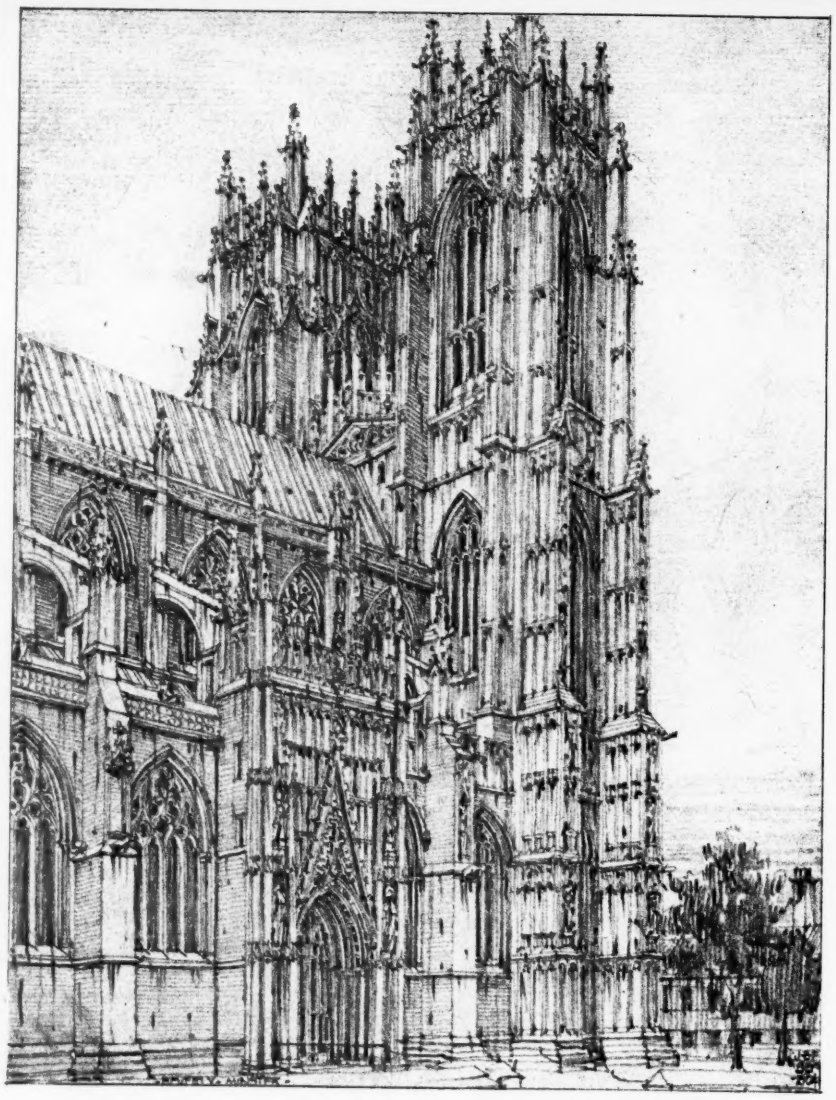

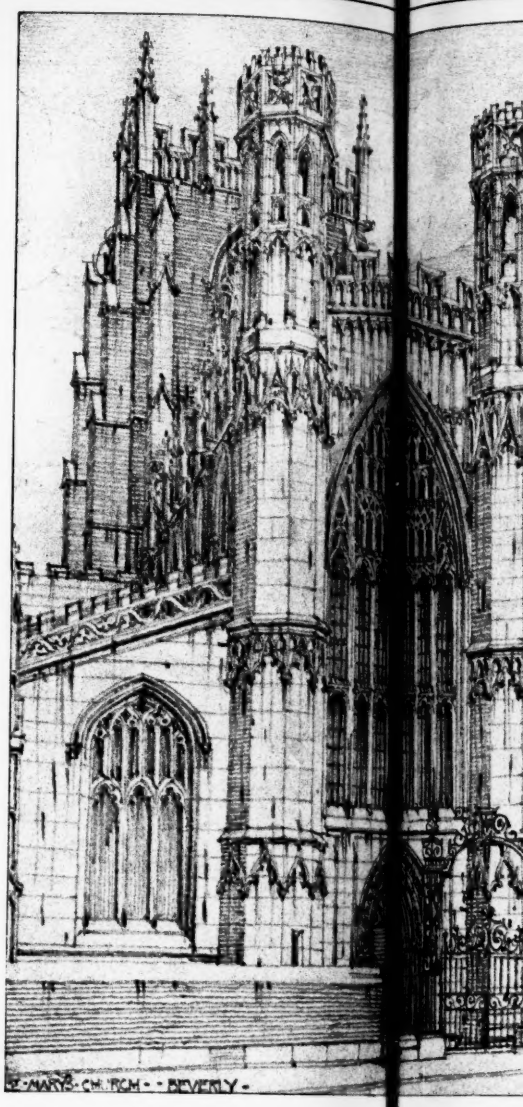

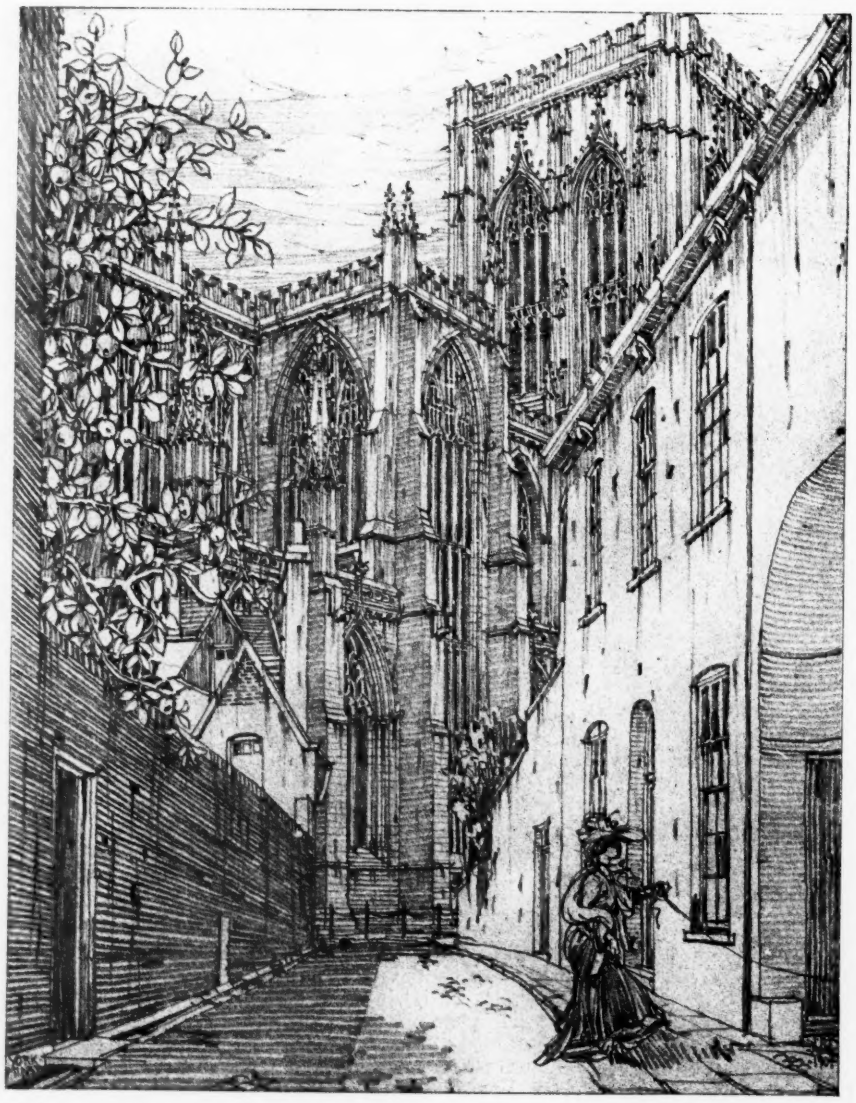

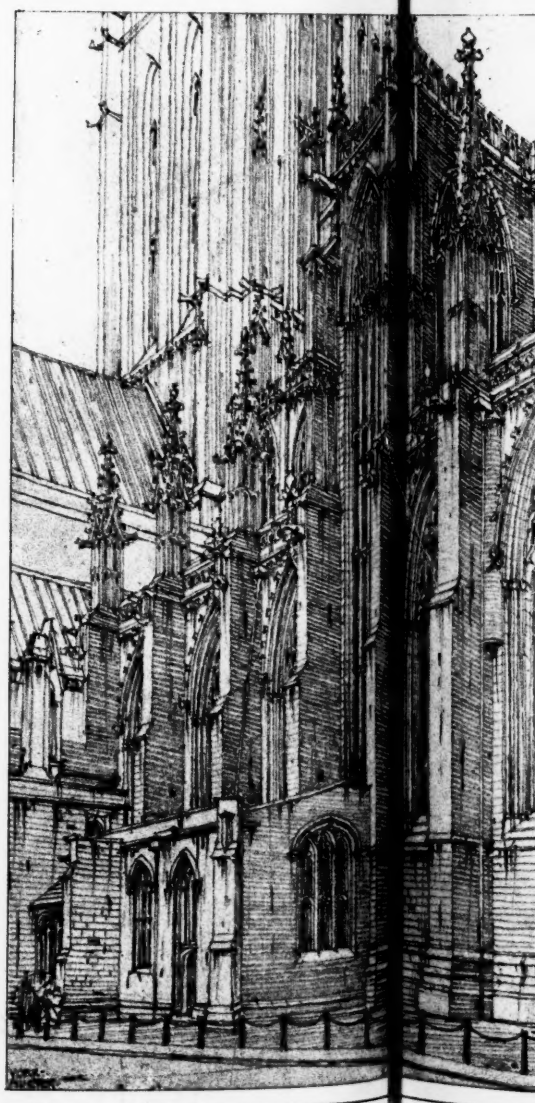

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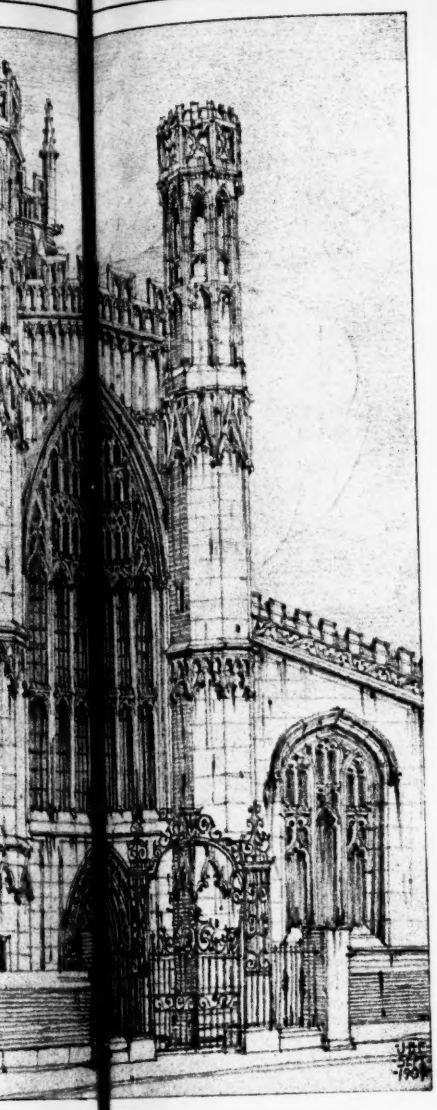

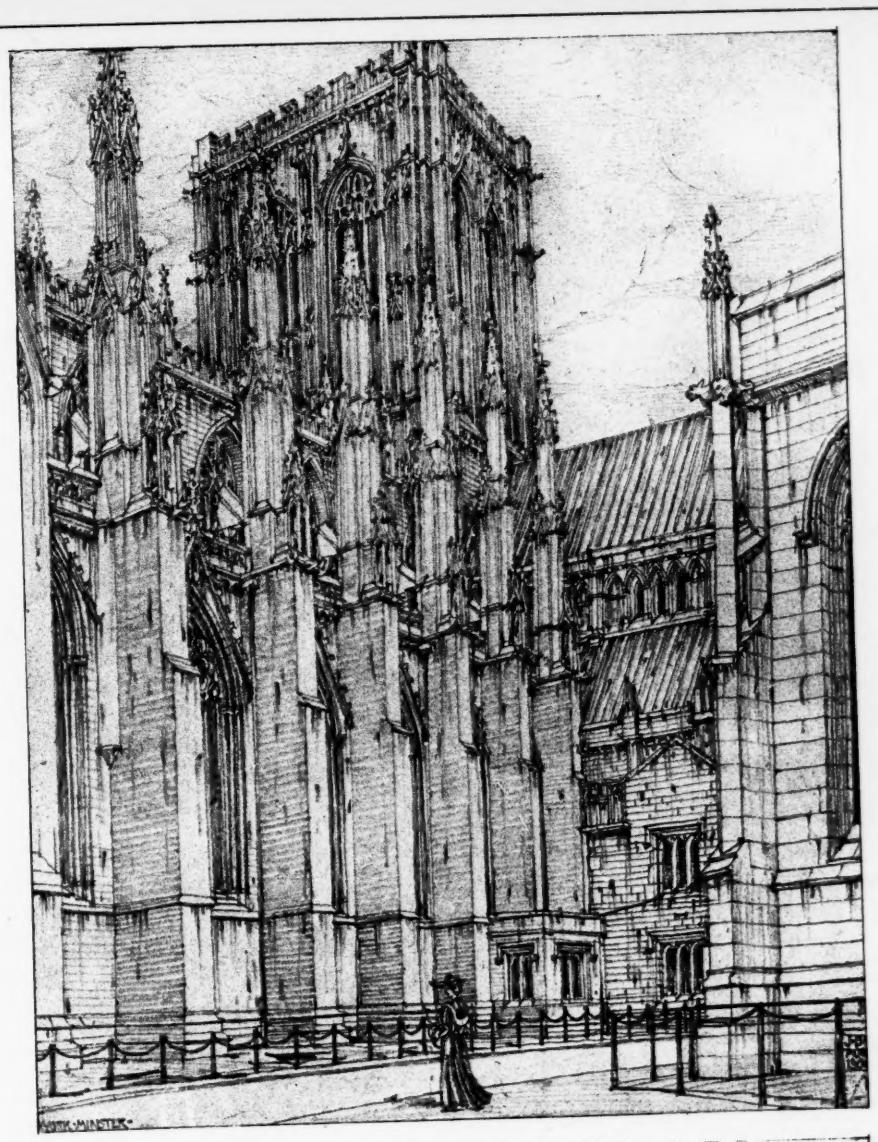

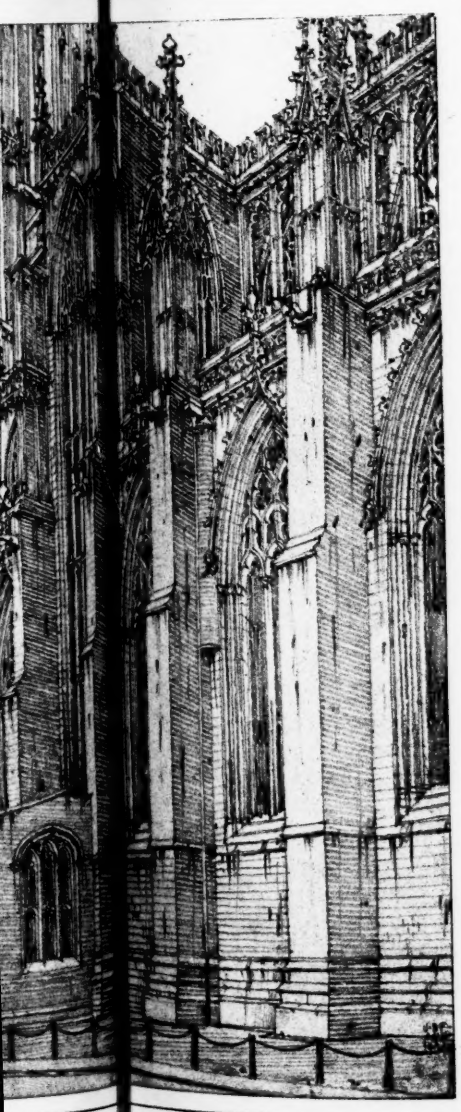

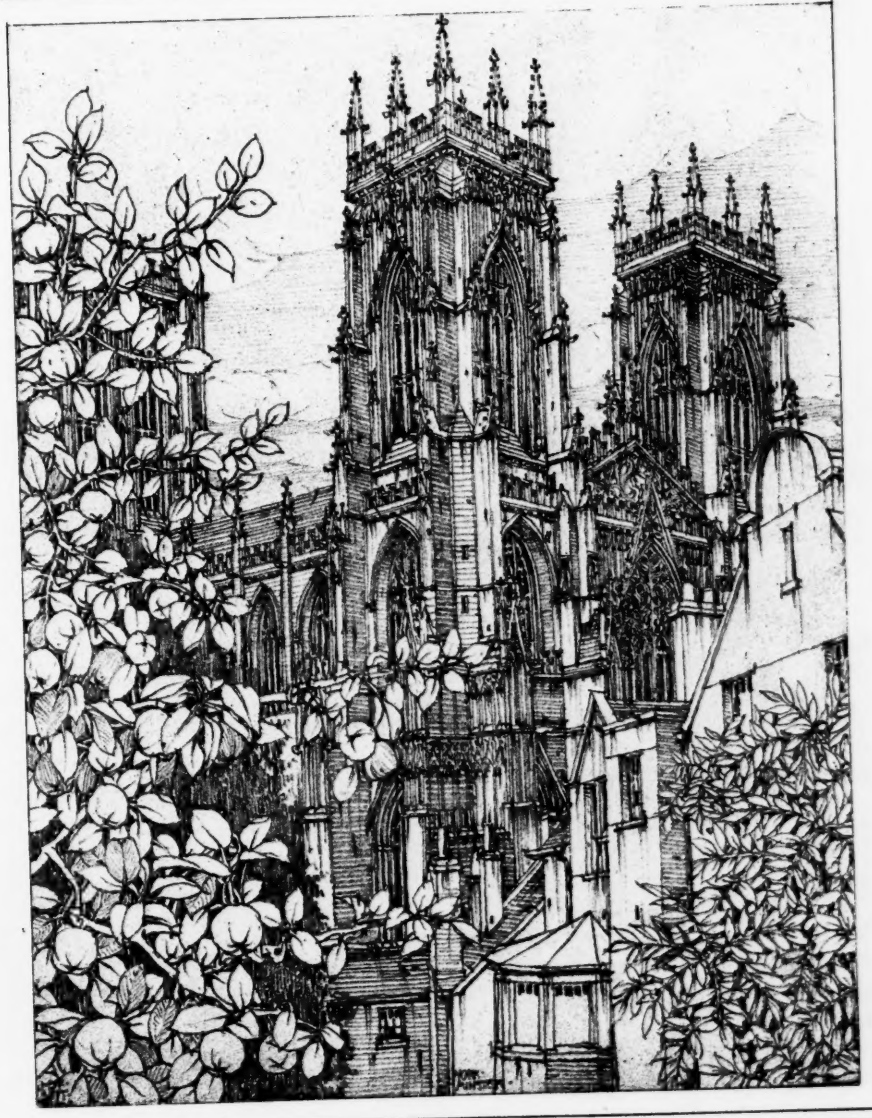

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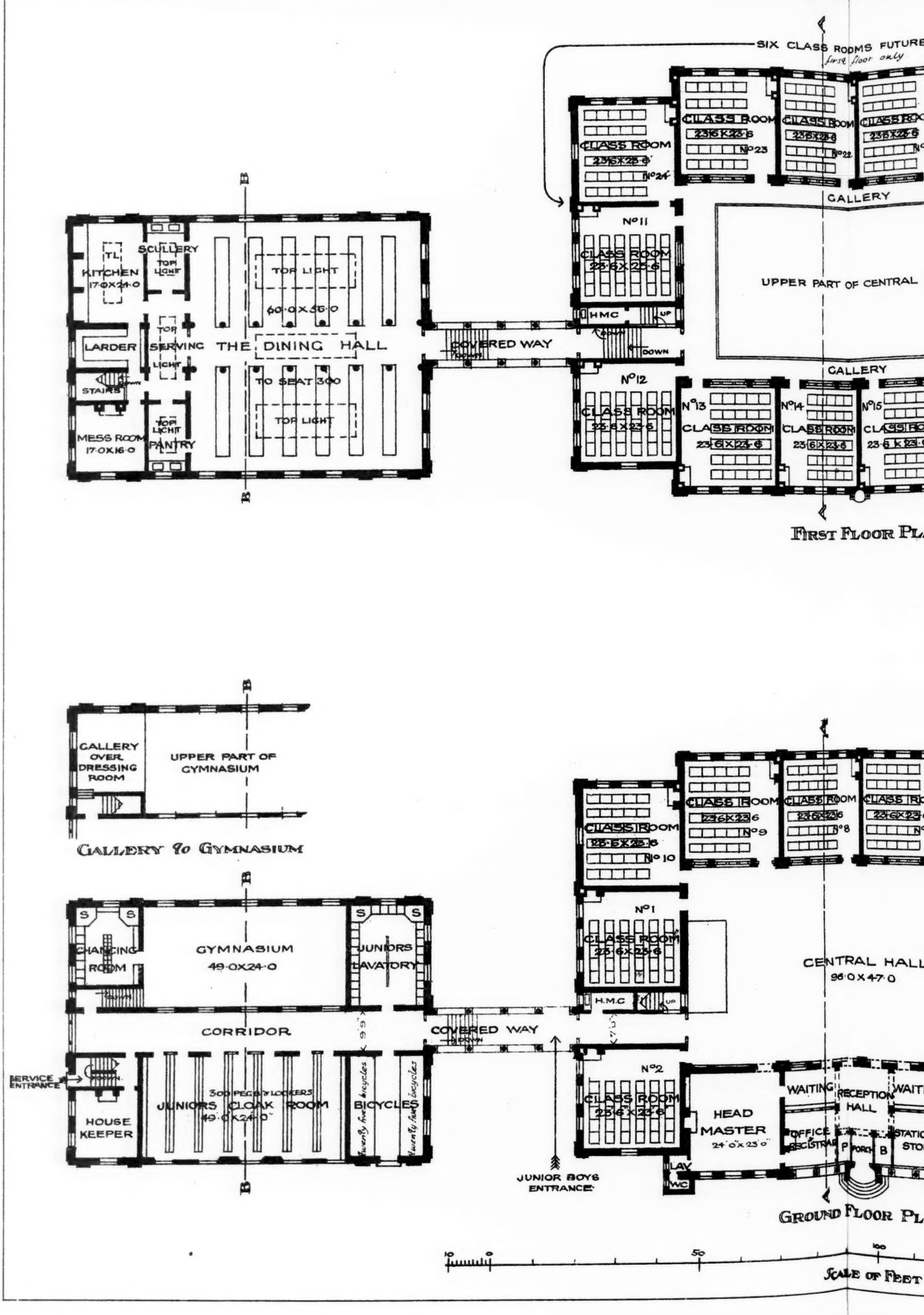

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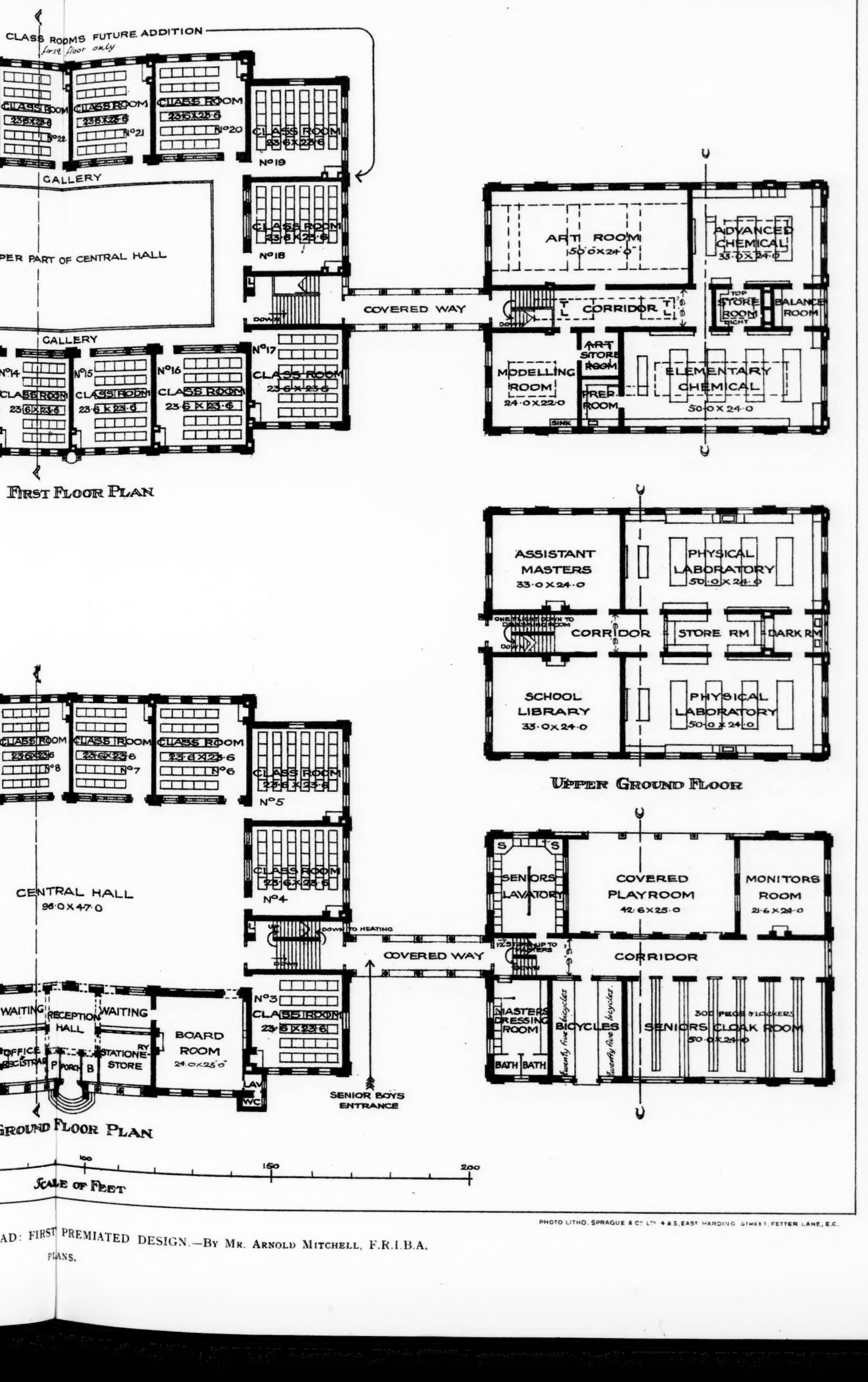

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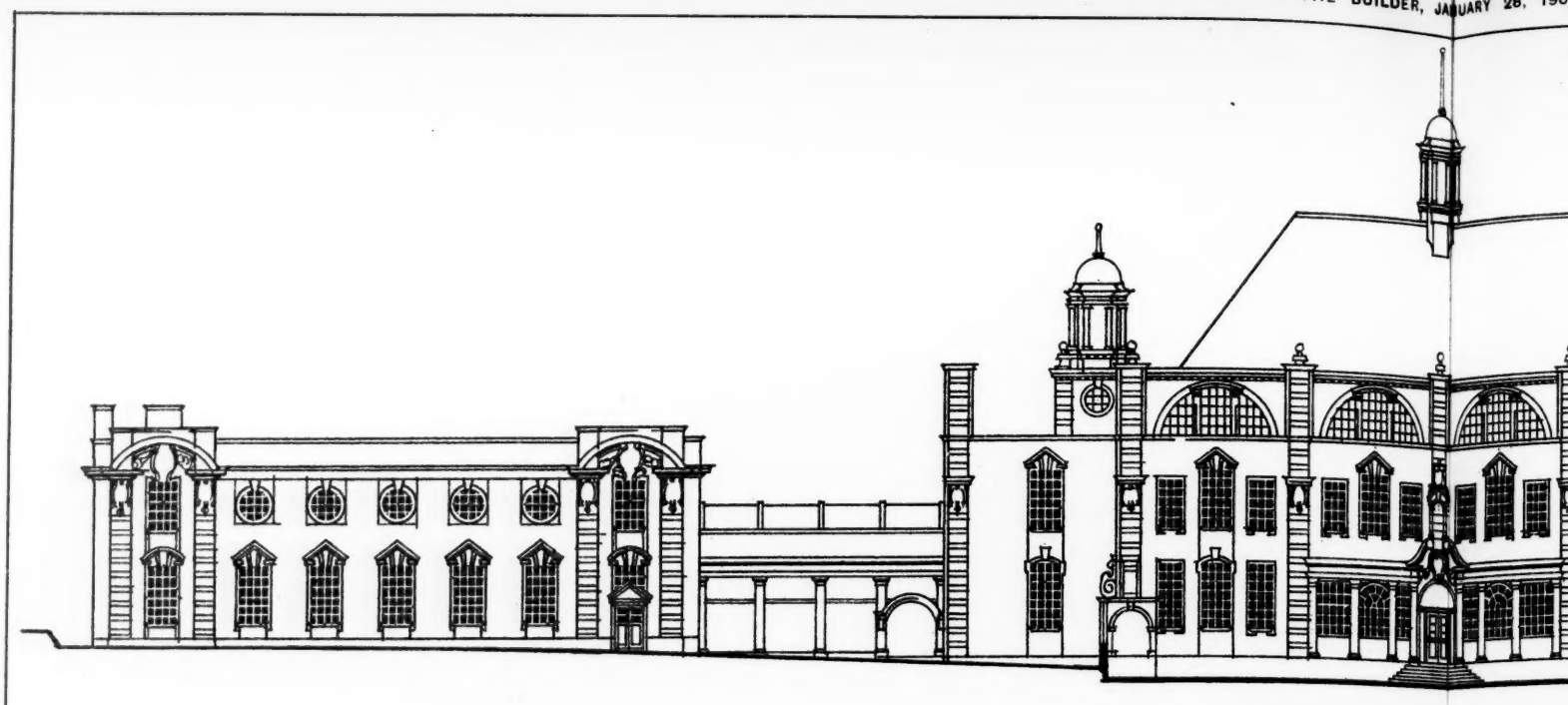

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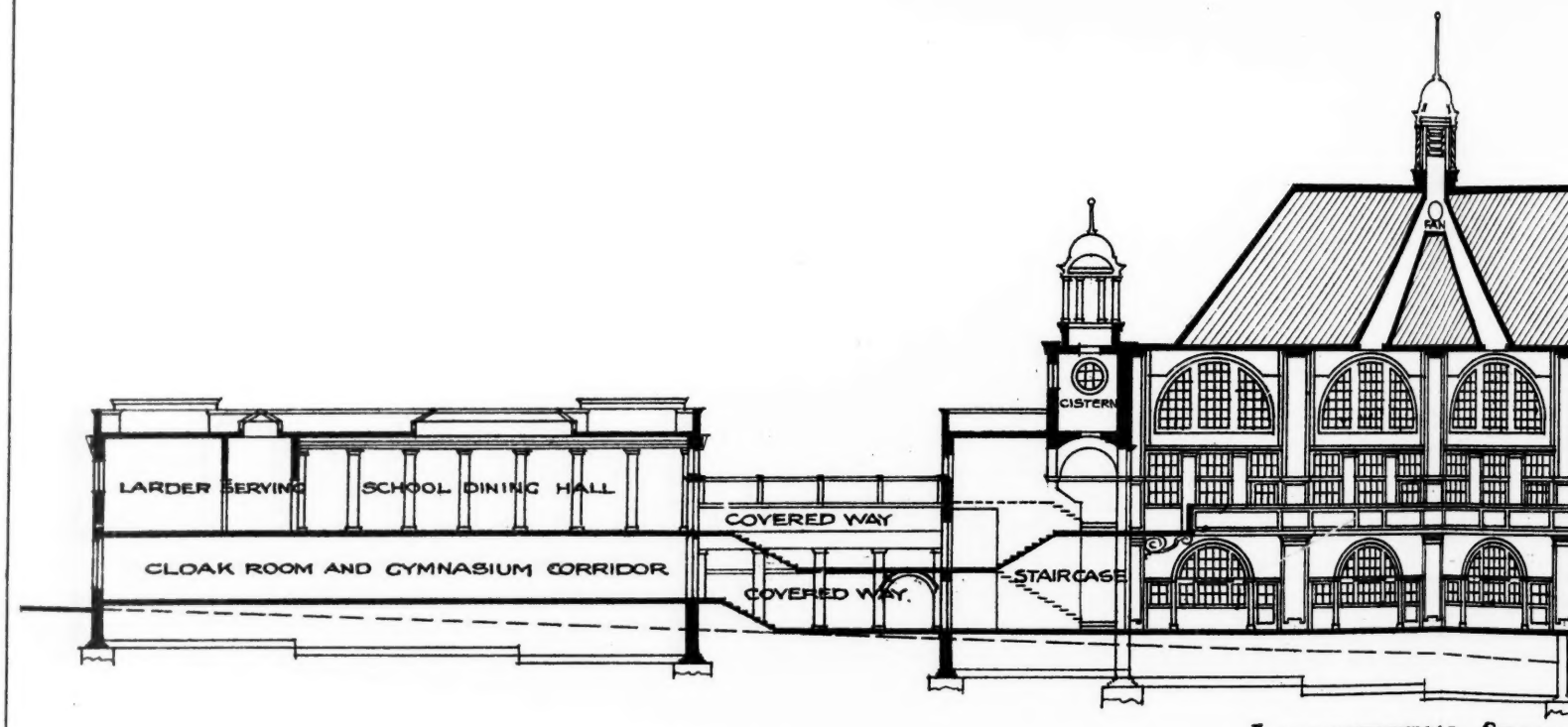

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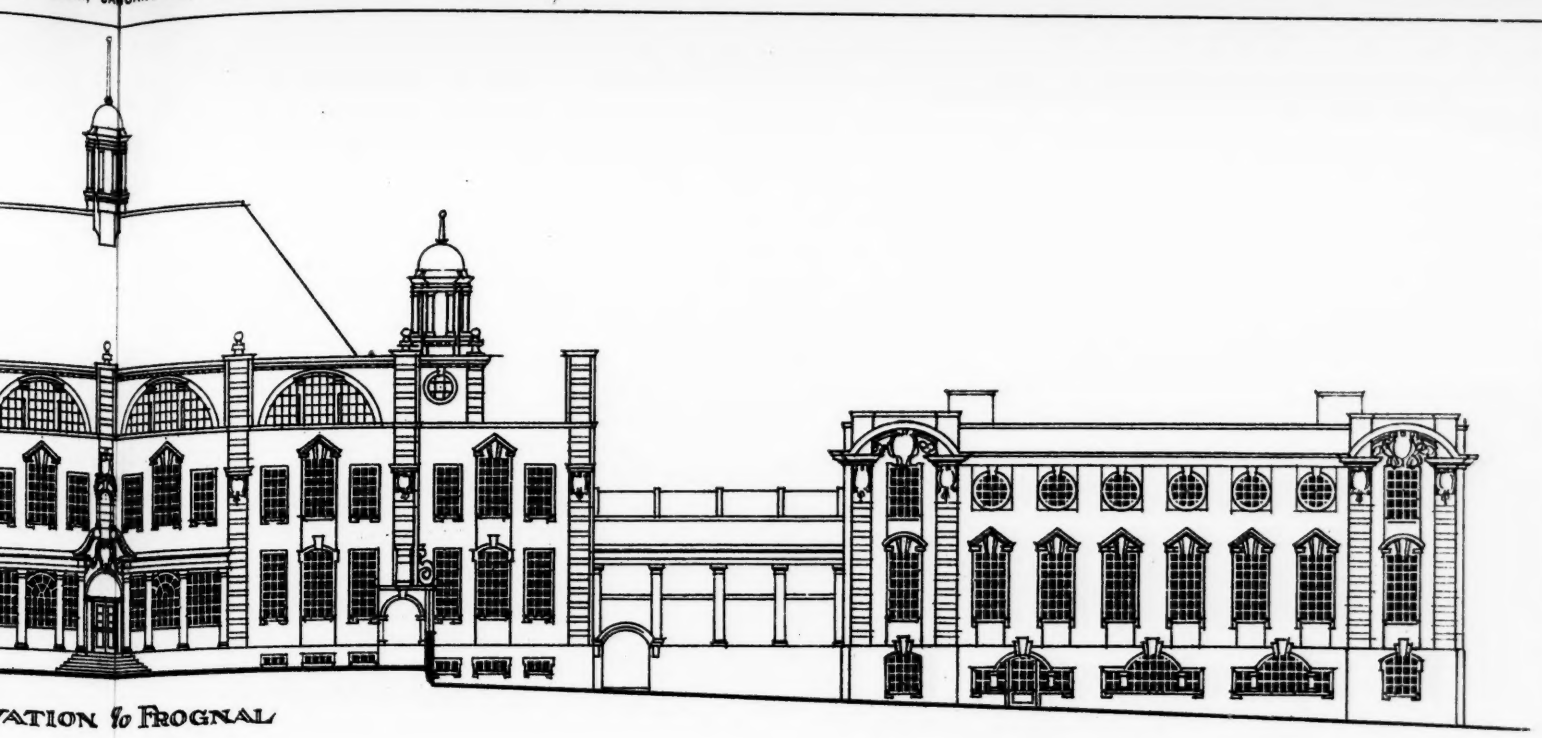

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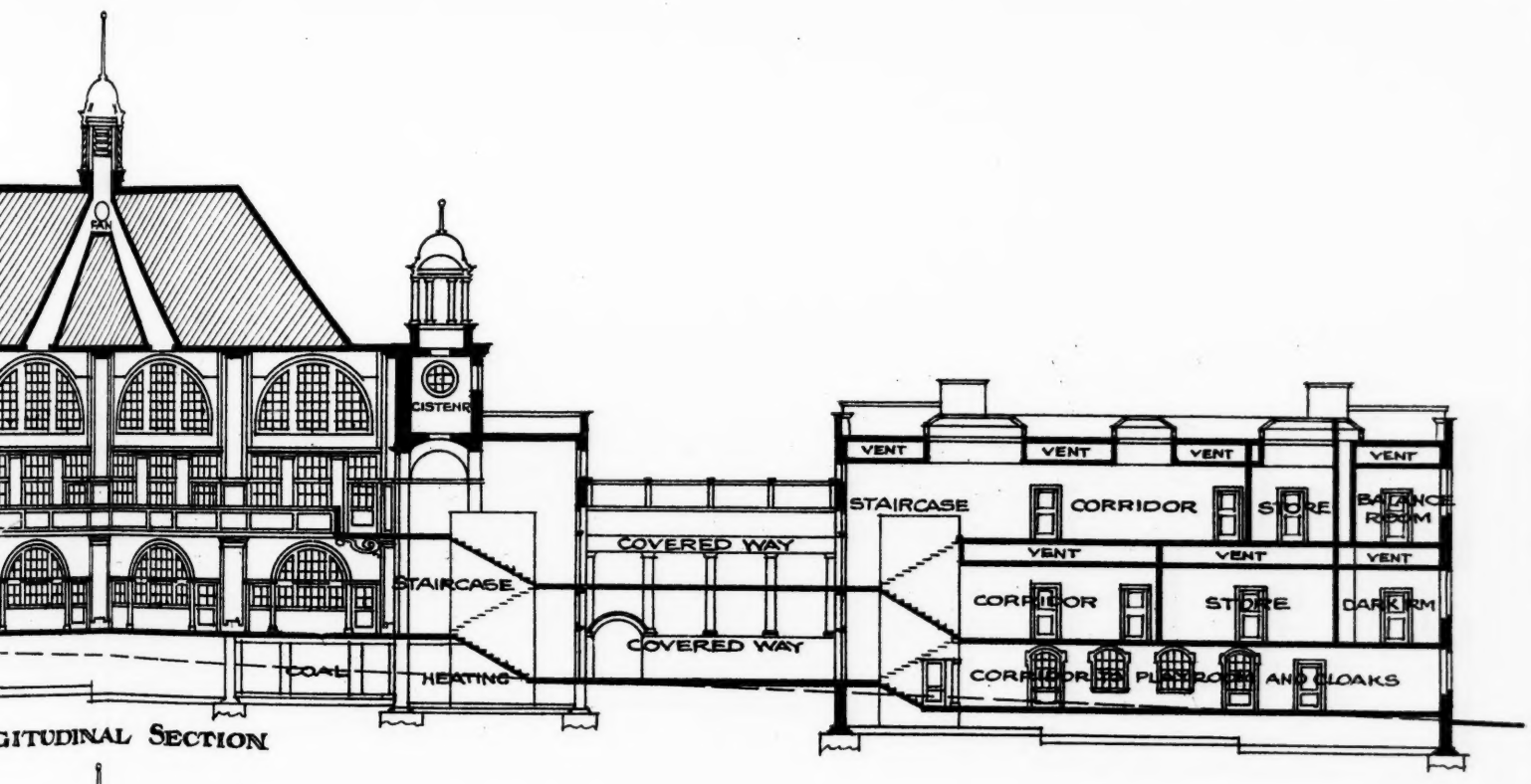

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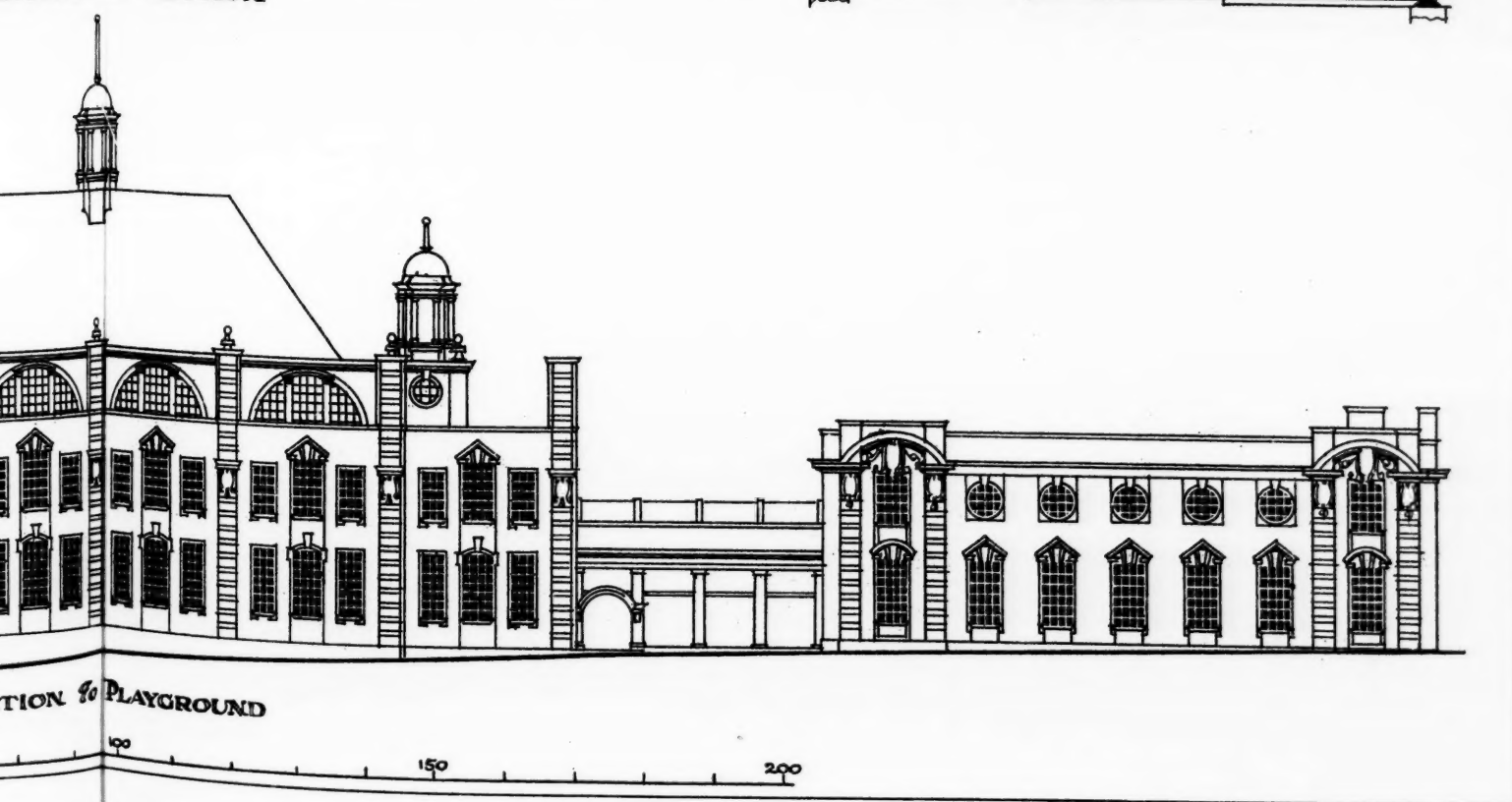

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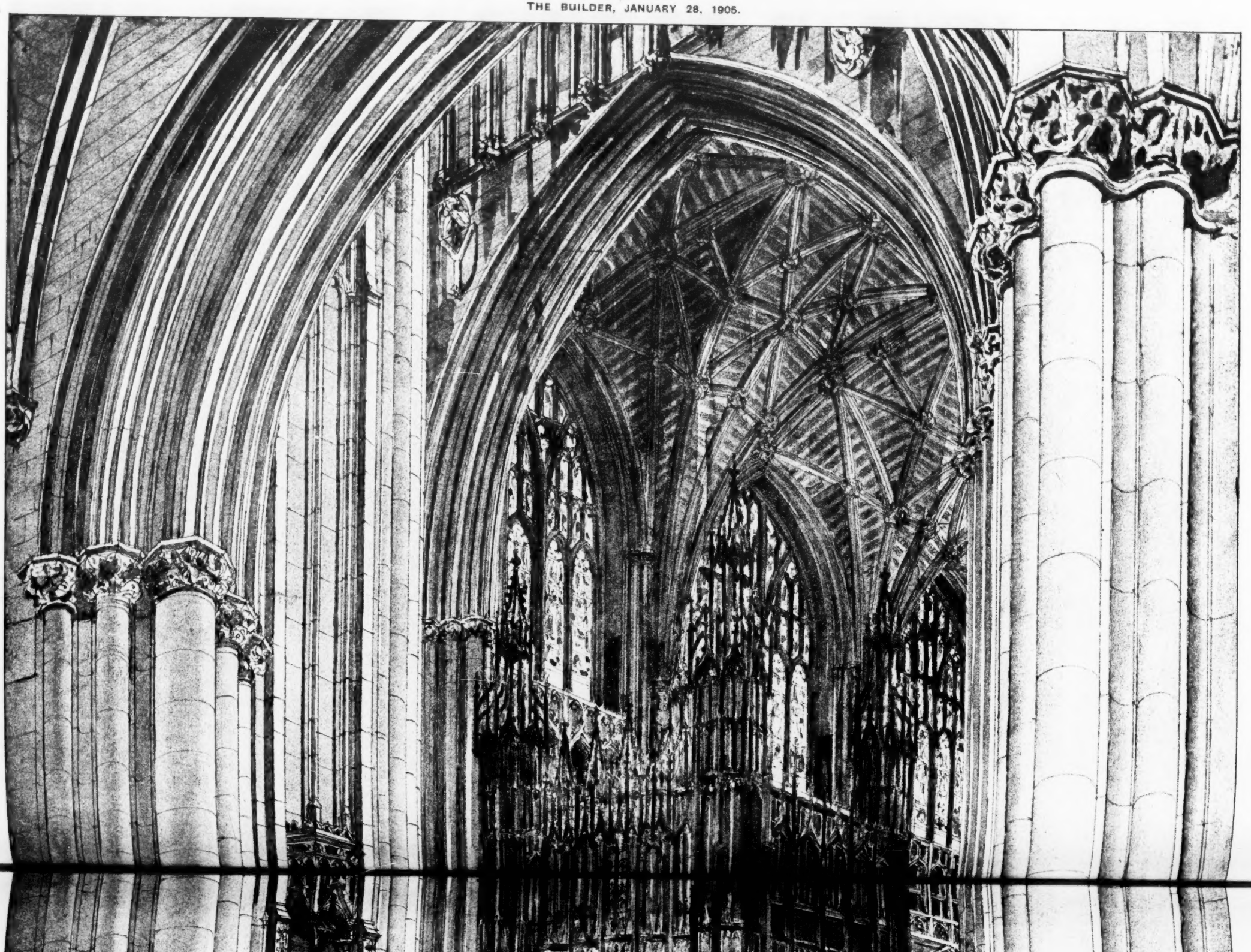

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